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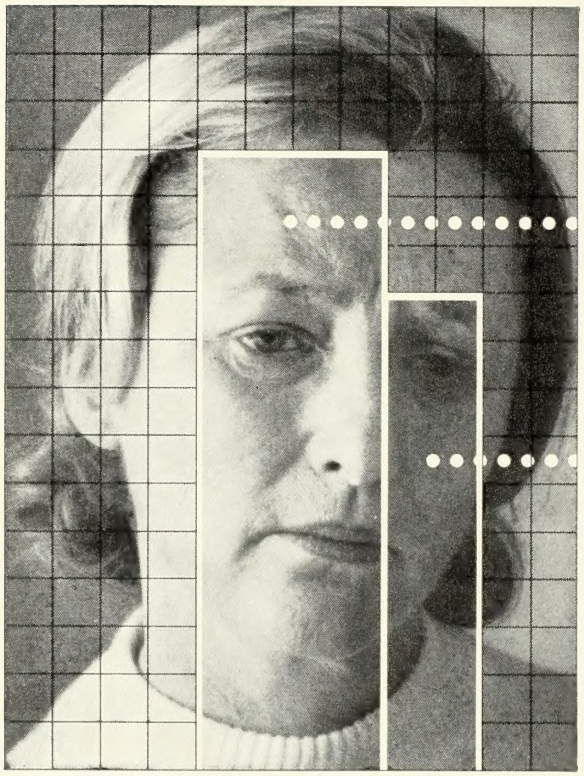
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THE Journal OF THE Kansas Medical Society

JANUARY
1975

VOL. LXXVI
NO. 1

Both often



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequen and/or severity of grand mal seizures m require increased dosage of standard an convulsant medication; abrupt withdraw may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous in gestion of alcohol and other CNS depres sants. Withdrawal symptoms (similar to those with barbiturates and alcohol) hav occurred following abrupt discontinuan (convulsions, tremor, abdominal and m cle cramps, vomiting and sweating). Ke addiction-prone individuals under caref

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

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Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Volume LXXVI, Number 1—January, 1975

The JOURNAL of the KANSAS MEDICAL SOCIETY

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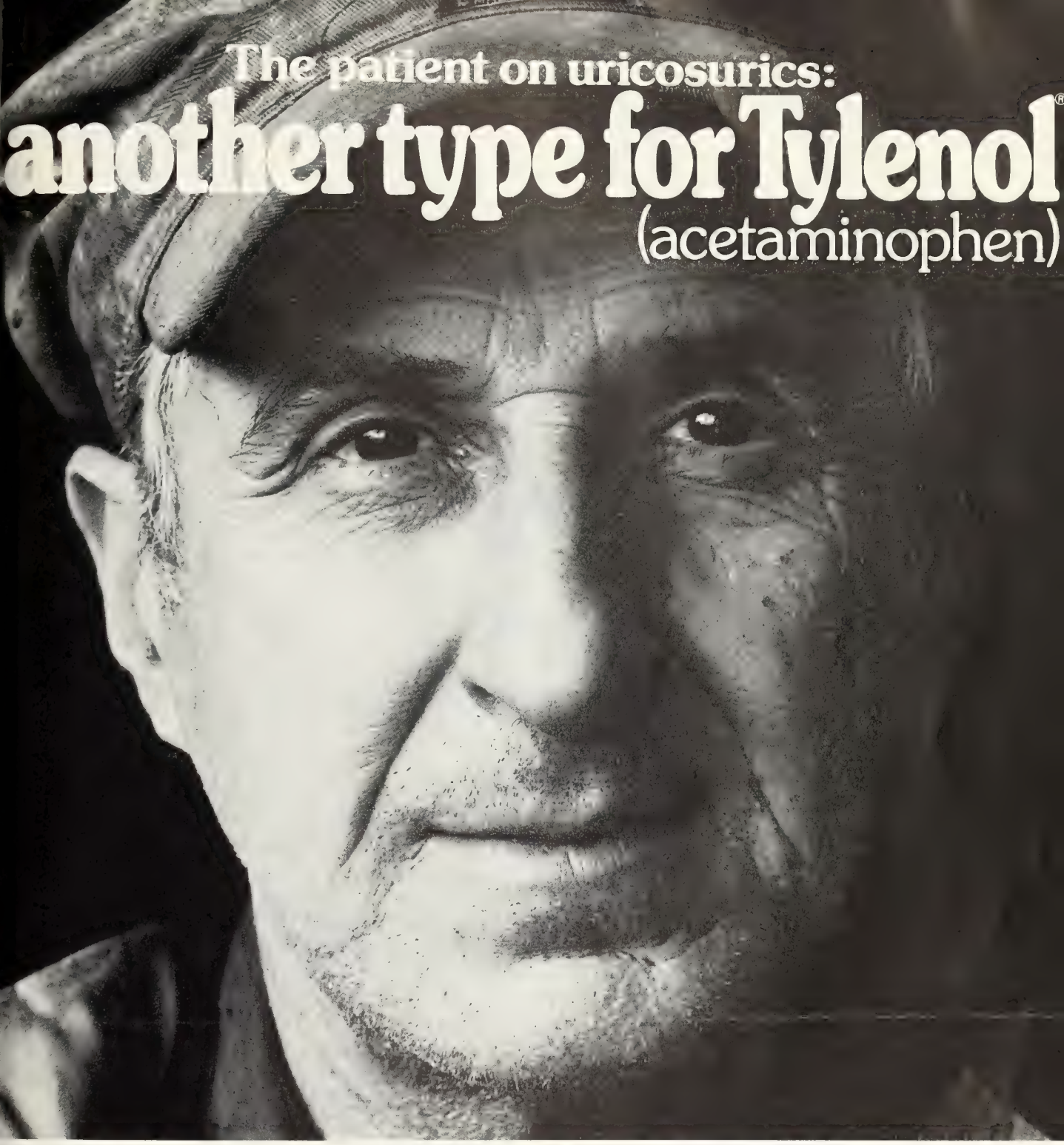
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The patient on uricosurics: another type for Tylenol® (acetaminophen)

When the patient on uricosuric therapy requires an analgesic, a new problem arises. Aspirin in the usual analgesic doses inhibits the action of uricosurics.[1,2]

TYLENOL (acetaminophen), on the other hand, causes no appreciable uricosuric antagonism[2] and for this reason is preferred over aspirin in the gout patient.

This is only one of several 'types for TYLENOL'—that is, patients who should avoid aspirin. Considering all of them, wouldn't it provide added safety (as well as added convenience) to recommend TYLENOL (acetaminophen) routinely for simple analgesia?

References: 1. Martin, E.W., et al., ed.: Hazards of Medication, Philadelphia, J.B. Lippincott Co., 1971, p. 511. **2.** Seegmiller, J.E.: Med. Clin. North Amer. 45:1259-1272 (Sept.) 1961.

Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. TYLENOL (acetaminophen) has rarely been found to produce any side effects.

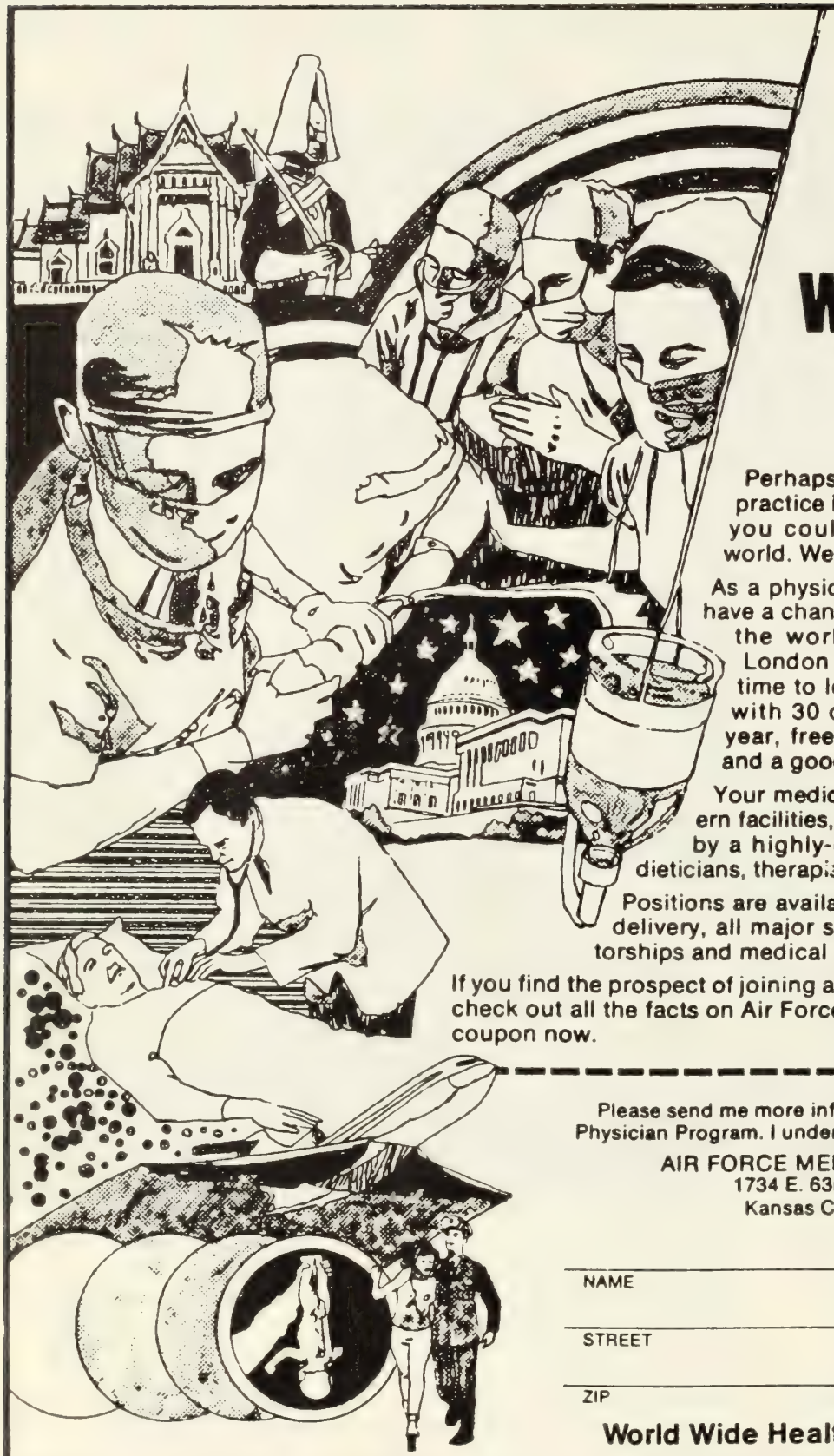
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For Children:
Elixir, 120 mg./5cc. (alcohol 7%).
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Safer than aspirin, yet just as effective for relief of pain and fever

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(acetaminophen)

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The MUDRANES

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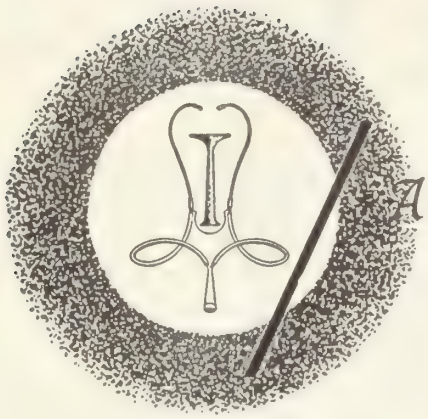
INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

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Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the **Doctor's Calendar.** ***Notice of the session is posted in advance to allow the physician time to make preparations.***

JANUARY

Jan. 2-7 — Pediatric Nephrology Seminar, Americana Hotel, Bal Harbor, Florida. Write: Dept. of Pediatrics, University of Miami School of Medicine, PO Box 520875 Biscayne Annex, Miami 33152.

Jan. 24-26 — AMA National Leadership Conference, Marriott Motor Hotel, Chicago.

FEBRUARY

Feb. 12 — 6th Annual Arthur E. Hertzler Memorial Lectures, The Hertzler Research Foundation, Halstead, Kansas.

Feb. 21-22 — Pediatric Behavior Management, Miami. Write: Dept. of Pediatrics, University of Miami School of Medicine, PO Box 520875 Biscayne Annex, Miami 33152.

Feb. 24-28 — 4th Annual Thyroid Symposium, Vail, Colorado. Write: T. A. Verdon, M.D., Penrose Hospital, Colorado Springs, Colorado 80907.

Feb. 27-Mar. 1 — Central Surgical Association, Drake Hotel, Chicago. Write: A. J. Walt, M.D., 540 E. Canfield, Detroit 48201.

MARCH

Mar. 6-9 — Student American Medical Association, Palmer House, Chicago. Write: C. C. Hewitt, J.D., 1400 Hicks Rd., Rolling Meadows, Ill. 60008.

Mar. 14-15 — 27th Annual Midwest Cancer Conference, Century II, Wichita.

Mar. 14-16 — National Medicolegal Symposium, Grand Hotel, Las Vegas. Write: AMA General Counsel, 535 N. Dearborn, Chicago 60610.

Mar. 20-21 — National Conference on Rural Health, Hotel Roanoke, Roanoke, Va. Write: B. L. Bible, Ph.D., 535 N. Dearborn, Chicago 60610.

APRIL

Apr. 16-19 — Missouri State Medical Association annual meeting, Chase-Park Plaza, St. Louis. Write: Ray McIntyre, 113 Madison St., Jefferson City 65101.

Apr. 17-20 — American Pediatric Society, Hilton, Denver. Write: C. D. Cook, M.D., Yale U. School of Medicine, New Haven, Conn. 06510.

Apr. 21-24 — 3rd Annual Spring Meeting, American College of Surgeons, Hyatt Regency, Atlanta. Write: ACS, 55 E. Erie, Chicago 60611.

Apr. 28-May 1 — Aerospace Medical Association, San Francisco Hilton, San Francisco. Write: M. H. Goodwin, M.D., Washington National Airport, Washington, D.C. 20001.

MAY

May 4-7 — Kansas Medical Society 116th Annual Session, Glenwood Manor, Overland Park.

University of Kansas Postgraduate Education:

Jan. 23-24 — *Gyn-Ob*
Feb. 12-14 — *Diagnostic Cytology*
Feb. 26 — *The Mentally Handicapped Child*
Mar. 12-14 — *Pediatrics*
Mar. 24-26 — *Surgery*
Apr. 7-9 — *Ophthalmology*
Apr. 10-11 — *Emergency Nursing Care*
Apr. 16-17 — *Family Practice*
Apr. 18 — *Infectious Diseases*
Apr. 21-23 — *Anesthesiology*
May 8-9 — *Cardiovascular Diseases*

Also see page 15A.

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Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed. "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

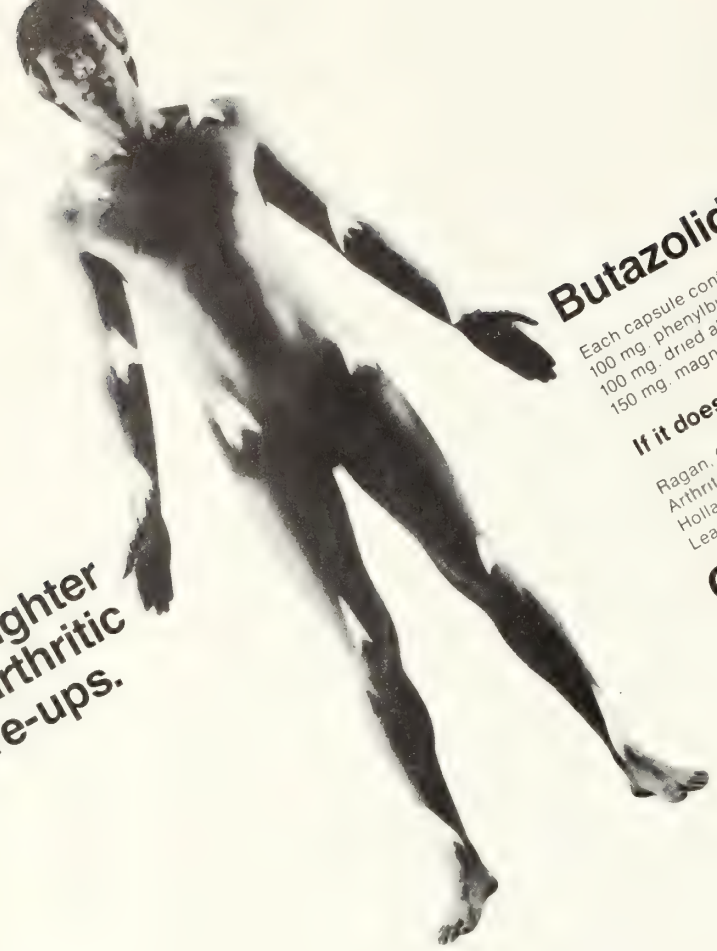
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



Fire fighter for arthritic flare-ups.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia), dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications. Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions. The following should be accomplished at regular intervals. Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

(E)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information

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BU 10259

adjunctive therapy for wound debridement

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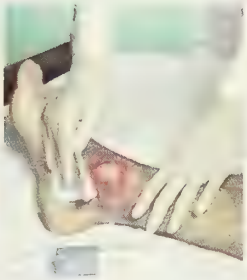
- Necrotic Tissue and Associated Odor

HELPS PREPARE WOUND FOR:

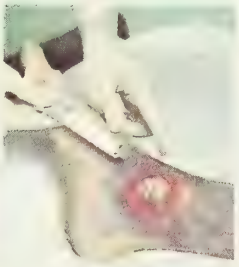
- Granulation/Healing
- Granulation/Grafting



CLEANSE WOUND
Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials.



THOROUGHLY MOISTEN
Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g., sodium chloride or water solutions).



APPLY ENZYME
Apply a layer of TRAVASE Ointment. Assure intimate contact with necrotic tissue and complete wound coverage.

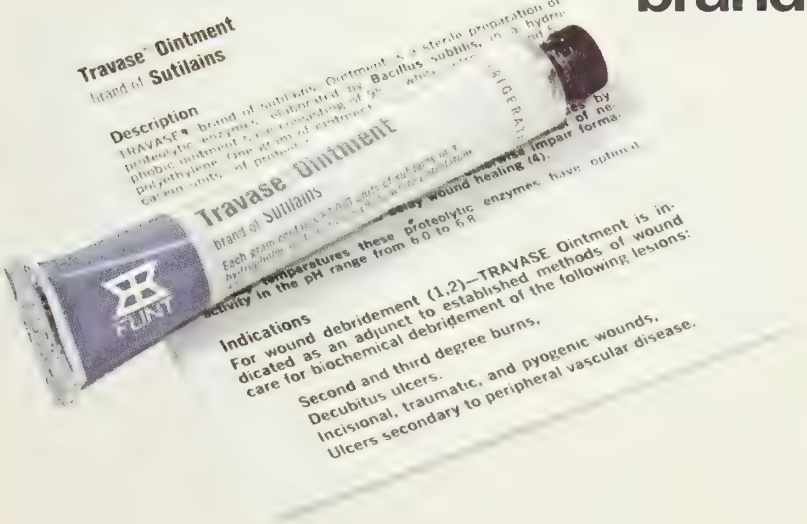


APPLY MOIST DRESSING
Apply loose moist dressings (most important with dry leathery eschar).



CHANGE DRESSINGS
When changing dressing, gently wipe away the dissolved material. Repeat the procedure, including application of TRAVASE Ointment, 3 to 4 times per day for best results.

Travase® Ointment
brand of Sutilains



Indications
For wound debridement (1,2)—TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:
Second and third degree burns,
Decubitus ulcers,
Incisional, traumatic, and pyogenic wounds,
Ulcers secondary to peripheral vascular disease.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Please see next page for prescribing information.

Travase® Ointment brand of Sutilains

ulcers

TERRY V. CARLE, M.D., CLINICAL INSTRUCTOR, DEPT. OF PHYS. MED. & REHAB.
CRAIG REHABILITATION HOSPITAL, UNIVERSITY OF COLORADO



Before treatment, necrotic matter coated the inner surfaces of this decubitus ulcer.



After nine days of TRAVASE therapy, debridement is nearly complete and granulation evident.

burns

DALE B. DUBIN, M.D., DIPLOMATE,
AMERICAN BOARD OF PLASTIC SURGERY, TAMPA, FLORIDA



Before treatment . . .



48 hours following treatment with TRAVASE Ointment on right hand; left hand is control.

Travase® Ointment

(brand of Sutilains)

Indications: For wound debridement, TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:

- Second and third degree burns,
- Decubitus ulcers,
- Incisional, traumatic, and pyogenic wounds,
- Ulcers secondary to peripheral vascular disease.

Contraindications: Application of TRAVASE Ointment is contraindicated in the following conditions:

- Wounds communicating with major body cavities,
- Wounds containing exposed major nerves or nervous tissue,
- Fungating neoplastic ulcers,
- Wounds in women of child-bearing potential—because of lack of laboratory evidence of effects of TRAVASE upon the developing fetus.

Warning: Do not permit TRAVASE Ointment to come into contact with the eyes. If contact is made, immediately rinse with copious amounts of water, preferably sterile.

Precautions: A moist environment is essential to optimal activity of the enzyme. Enzyme activity may also be impaired by certain agents (see package insert). Although there have been no reports of systemic allergic reaction in humans, studies have shown that there may be an antibody response in humans to absorbed enzyme material.

Adverse Reactions: Consist of mild, transient pain, paresthesias, bleeding and transient dermatitis. Pain usually can be controlled by administration of mild analgesics. Side effects severe enough to warrant discontinuation of therapy occasionally have occurred.

If bleeding or dermatitis occurs as a result of the application of TRAVASE Ointment, therapy should be discontinued. No systemic toxicity has been observed as a result of the topical application of TRAVASE Ointment.

DOSAGE AND ADMINISTRATION: STRICT ADHERENCE TO THE FOLLOWING IS REQUIRED FOR EFFECTIVE RESULTS OF TREATMENT:

1. Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials which may denature enzyme or alter substrate characteristics (e.g., hexachlorophene, silver nitrate, benzalkonium chloride, nitrofurazone, etc.).
2. Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g. sodium chloride or water solutions).
3. Apply TRAVASE Ointment in a thin layer assuring intimate contact with necrotic tissue and complete wound coverage extending ¼ to ½ inch beyond the area to be debrided.
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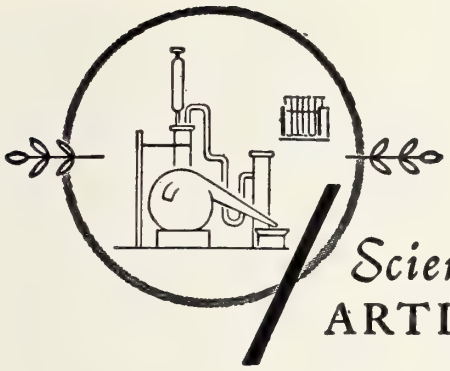
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Respiratory Distress Syndrome

Antenatal Steroid Therapy in Premature Twins

TOM C. SIMPSON, M.D., ***Wichita***

RECENT ADVANCES in neonatology have done much to increase the survival of infants with idiopathic respiratory distress syndrome (IRDS). Yet, IRDS is the major cause of mortality during the first week of life, and occurs in 0.5 to 1 per cent of all deliveries. Gluck[1] estimates that in the United States each week, 1,000 infants develop IRDS, with somewhere between 25,000 and 40,000 of these infants dying of their disease or its complications each year. The incidence is markedly increased in infants born before 37 weeks gestation, in infants of diabetic mothers, in infants delivered from mothers with antepartum vaginal bleeding, and in infants delivered by Cesarean section.

Until recently, the therapeutic attack on IRDS has centered on the infant during the post-partum period. It now appears that treatment of certain mothers in premature labor with corticosteroids during the 48-72 hours prior to delivery may appreciably improve fetal survival and decrease the incidence of IRDS.[2]

After only 165 days of gestation, twins weighing 822 gm were delivered from a mother who had been treated during the 60 hours prior to delivery with betamethasone. The twins, although grossly premature, exhibited little respiratory distress. The scientific and clinical basis for this therapeutic regimen is presented.

Case Report

A 20-year-old white, married woman came to the Family Practice Center in May 1973, for prenatal care and delivery. Her stated last normal menstrual period was March 3, 1973, and she was considered to be a reliable historian. This was her first pregnancy. She had been off of contraceptive pills since October 1972. Her only complaint was that of morning nausea. The patient had non-identical twin brothers. Physical examination, including clinical pelvimetry, was entirely normal.

Address reprint orders to: T. C. Simpson, M.D., Dept. of Family Practice, St. Joseph Hospital, Wichita, Kansas 67218.

The prenatal laboratory findings revealed normal CBC; O positive blood; negative maternal antibodies; rubella titer of 1:80; non-reactive VDRL; a Class I Pap smear; cervical culture negative for GC; and urinalysis showing 2+ bacteriuria. The asymptomatic bacteriuria was inadvertently not followed up at this time. Prenatal vitamins with folic acid and dicyclomine hydrochloride were prescribed.

Monthly prenatal visits revealed a 10-cm increase in fundal height between the 14th and 18th weeks, accompanied by a 10-pound weight gain without edema, proteinuria, or hypertension. At 21 weeks, a single fetal heart tone was first heard with the deLee stethoscope. The diagnosis of twins was entertained but not confirmed. Four weeks later, at 25 weeks gestation, the patient complained of lower abdominal pain radiating around both flanks, frequency, and a bloody vaginal discharge. A catheter-obtained urine specimen showed 1+ bacteriuria, occasional WBCs, and 2+ RBCs. A diagnosis of lower urinary tract infection was made, and a therapy was started of 2 gm of ampicillin daily, and

advice to drink plenty of fluids. Forty-eight hours later, her urine culture was read as "no growth."

Five days later, the patient was admitted to the labor room because of increasing suprapubic and flank pain. On office examination, her uterine cervix had been found to be dilated 4 cm and 90 per cent effaced, her membranes were intact, and vaginal secretions were Nitrazene negative. Admission urinalysis was normal. Her pain was constant in nature, and no definite uterine contractions were palpable. Amniotic fluid studies for determination of fetal maturation were not performed.

Although the patient was unable to feel any cyclic uterine pain, short, irregular contractions were abdominally palpable. During the next 72 hours, using the method of Zlatnik and Fuchs,[3] 10 per cent ethanol was given intravenously on three occasions to stop these contractions. The patient's effacement and dilatation pattern seemed to correlate well with the presence or absence of these contractions.

In an attempt to accelerate fetal lung maturation, a mixture of 6 mg betamethasone sodium phosphate and 6 mg betamethasone acetate was administered intramuscularly 12 and 36 hours after admission.

Ampicillin therapy was continued intramuscularly. Intramuscular prochlorperazine was used to treat the patient's nausea and vomiting.

At 71 hours after admission, the patient was taken to the birth rooms and her membranes ruptured. A local infiltration of the perineum with 1 per cent lidocaine hydrochloride preceded a midline episiotomy. After 165 days of gestation, the first of twins, a male weighing 822 gm (1 lb 13 oz) was delivered with outlet forceps. Within minutes, under general anesthesia, the second twin, also a male weighing 822 gm, was delivered as a double footling by total breech extraction. The mother's post-partum course was uncomplicated, and she was dismissed from the hospital on the second post-partum day.

Hospital Course of Twins

Each baby was taken in a preheated, oxygenated transport incubator to the newborn intensive care unit and placed in a separate preheated incubator.

Initial physical examination showed both boys to be grossly premature. Their heads appeared disproportionately large and their eyelids were fused shut. Their external ears were floppy and their mandibles appeared underdeveloped. The thinness of their skin was accentuated by the lack of subcutaneous fat. Both their palms and their soles lacked skin creases. Movement of the arms and legs was jerky in nature. Sucking and swallowing were present, but the boys fatigued easily. Both boys exhibited Moro's reflex.

Umbilical venous catheters were placed and intravenous 10 per cent glucose and sodium bicarbonate therapy, as described by Usher,[4] was started. Both boys exhibited moderate intercostal and substernal retractions for about 12 hours. During this time, it was necessary to maintain the ambient oxygen concentration at 60 per cent to prevent cyanosis. Only 30 per cent oxygen concentration was necessary to prevent cyanosis during the next nine days, after which oxygen was used only after apneic spells. Continuous positive airway pressure was not needed at any time.

Initial chest x-rays revealed bilateral ground-glass densities and air bronchograms suggesting early hyaline membrane disease in each of the boys. These changes had disappeared by four days of age.

The fluid balance was maintained for 7 and 14 days by intravenous therapy. Gavage feedings of glucose water were initiated on the fourth day. They advanced through half-strength 13 cal/oz formula to 24 cal/oz formula during the next ten weeks. By five weeks, the infants were able to take their entire fluid and caloric requirements by bottle.

Episodes of apnea, believed to be secondary to the central nervous system immaturity, continued to be a problem for about six weeks. These episodes were always effectively treated by the nursing personnel, with tactile stimulation or brief respiratory support. These episodes of apnea were particularly a problem after feedings. The second twin experienced one episode of aspiration following an early attempt at bottle feeding, necessitating intubation, suction, and systemic steroids.

A physiological anemia of prematurity in both boys was responding well to oral iron therapy on discharge.

The twins were discharged to the care of their parents on the 74th hospital day. Discharge and subsequent office physical examinations have revealed no abnormalities in physical condition or psychomotor development.

Discussion

In 1972,[2] Liggins reported from New Zealand a controlled trial of betamethasone therapy in 282 mothers in whom premature delivery threatened or was planned before 37 weeks gestation. His patients received either a mixture of 6 mg betamethasone phosphate and 6 mg betamethasone acetate, or a control substance. Intravenous ethanol or sulbutamol was given to inhibit uterine activity for 48 to 72 hours. In 32 planned deliveries for hypertension-edema-proteinuria syndromes, the betamethasone-treated group had a higher perinatal mortality (31.6%) than did the control group (15.4%). However, in 213 unplanned premature labors, the perinatal death rate in the treatment group (6.4%) was

significantly lower than the control group (18.0%). The difference in the frequency of respiratory distress syndrome found in betamethasone-treated infants (4.3%) as compared to the control group (24.0%) was largely confined to infants delivered at less than 32 weeks (11.8% compared to 69.9%). Liggins noted no complications of pregnancy, labor, delivery, or the puerperium that could be attributed to steroid medication.

The scientific basis for the antenatal use of steroids, as applied successfully in the case presented, lies in the pediatric, obstetrical, endocrinologic, and physiologic literature of the past 8-10 years. deLamos, *et al.*[5] demonstrated in 1970, as had Liggins in 1968, that the appearance of pulmonary surfactant in the fetal lamb lung could be accelerated by the administration of corticosteroids. Kotas and Avery[6] made similar observations with the fetal rabbit in 1971. The mechanism of action responsible for this phenomenon remains unknown. Buckingham[7] suggests that glucocorticoids cause induction of an enzyme concerned with the biosynthesis of surfactant, the surface-active agent found in the alveoli. Platzher[8] found the concentration of surfactant in lung homogenates of human fetuses was adequate for extrauterine survival as early as 127 days gestation. If the surfactant is indeed present at this early age, perhaps then it is the release of surfactant into the alveoli for which the glucocorticoids are responsible.

The measurement of the human amniotic fluid lecithin/sphingomyelin (L/S) ratio is presently thought to best reflect the degree of fetal lung development. It is interesting to note, then, that there was significantly greater rate of rise in the L/S ratio in women who received corticosteroids between their 28th and 32nd week of gestation than in the control group.[9] Indeed, it has been suggested that the amniotic fluid L/S ratio be one of the primary factors to consider before initiation of antenatal steroid therapy.

Is this a panacea for IRDS in premature infants? Not entirely. First, steroids should be given to the fetus for at least 24, and preferably 48 hours before delivery, if any noticeable effect on lung function is to be found. This is not always possible and may even be contraindicated. Liggins treated all patients with ruptured fetal membranes on admission with antibiotics and limited the period of suppression of labor to 48 hours.

Second, the benefit of antenatal steroids in a diabetic mother would have to be weighed against the possible fetal risk of uncontrolled blood sugars in the mother. Indeed, a study exists demonstrating a lack of benefit from cortisone treatment in infants of diabetic mothers.

Liggins[2] found an increased risk of fetal death in pregnancies complicated by severe hypertension-edema-proteinuria syndromes and treated with betamethasone.

There is little evidence to suggest that the short-term use of steroids will have any adverse effect on either the mother or the fetus in an otherwise uncomplicated premature labor. Carson[10] found reduced numbers of lung cells in hydrocortisone-treated rabbits. Large doses of steroids given to fetal rats may result in permanent neurological deficits. However, followups of infants born to Cushinoid mothers have usually revealed normal children. Longer followup of infants treated with antenatal steroids needs to be reported.

Summary

It would be difficult to prove or disprove a cause-effect role of the antenatal steroids in the survival of these premature twins. However, with the well-documented scientific basis for this mode of therapy and with the excellent results—here reported as an isolated case summary and as collected and reported by Liggins—one cannot help but be optimistic about the future role of glucocorticoids in the antenatal prevention of IRDS in the premature infant.

The antenatal use of glucocorticoids is not yet the usual and customary treatment. It may well come to be so during the next few years. Controlled studies are now under way at a number of American neonatal research centers. From these studies will, no doubt, come more specific indications and contraindications for the use of this regimen.

Acknowledgments

Herbert H. Goldberg, M.D., F.A.C.P., Director of Pediatrics, and Richard L. Morrison, M.D., F.A.C.F.P., Assistant Director of Family Practice, did the clinical supervision and critical review.

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(Continued on page 10)

Digitalis Levels

Management of the Digitalized Patient

SHARFUDDIN SHAH, M.D., CHARLES R. McREYNOLDS, M.D. ***and***
DONALD D. DECKER, M.D., ***Halstead***

PLASMA LEVELS of appropriate digitalis preparation for this study were obtained from digitalized patients whenever the clinical condition of the patient suggested the possibility of either overdose and toxicity, or underdose and inadequate response to medication. In some instances, plasma levels were obtained to verify the response to changes in dose or type of preparation of digitalis.

Blood samples, with EDTA as an anticoagulant, were collected in the case of digoxin four hours after the last oral dose of this medication. This was in order to obtain the maximum or peak level. Although digitoxin levels do not fluctuate as rapidly, for the sake of conformity, plasma digitoxin levels were also collected four hours after the last oral administration of this medication. Because of economic factors, to be discussed later, it was decided to perform this test only on certain days of the week unless the test was ordered to be done immediately. The test was either performed on fresh (within a few hours) plasma, or upon thawed-frozen plasma, which had been frozen immediately after collection.

A standard radioimmunoassay curve was obtained by a competitive binding process between a known set of dilutions of the pure drug and a specific antibody, and a standard preparation of I^{125} radioactive labeled drug *(Figure 1)*. After separation of the bound and unbound fractions by charcoal absorption *(Figure 2)*, the bound radioactive fraction was counted and calculated as a per cent of the previously counted total radioactivity. This was then plotted on logit paper with per cent of bound radioactivity along the ordinate, and the concentration in nanograms per milliliter along the abcissa *(Figure 3)*. The unknown or sample was treated in the same manner, and the concentration was calculated from the established curve.

Results

A special form *(Figure 4)* was prepared which the clinician used to request the test. In addition to the usual identifying material regarding the patient's name and age, certain pertinent data were requested to be recorded, and these were specifically pointed toward the eliciting of symptoms of either overdose and toxicity, or underdose and underdigitalization. This material was later reviewed by the clinician, usually after the patient had been discharged from either the hospital or the clinic, and a note was made as to the outcome. An attempt was made to evaluate as to whether or not the plasma level was useful as an aid in evaluating the patient, and whether or not any action had been performed on the basis of the laboratory report. The action consisted of either adjusting the dose of medication, up or down, or a decision to maintain the patient on that dose. In addition, after review of the clinical record, an attempt was made to judge whether or not the laboratory report was in agreement with the clinical status of the patient as reviewed retrospectively. In order to reduce or minimize selectivity of data and results, the number of consecutive evaluations during the next five months were used. This series consisted of 23 patients receiving digoxin, on whom 33 tests were performed (on some patients, more than one test was ordered); and 19 patients receiving digitoxin, on whom 25 plasma levels were performed. The toxic and nontoxic levels as reported by Smith, *et al.*[1, 2] were used *(Figures 5 and 6)*.

Kits from various manufacturers, containing radioisotope labeled "Digoxin" and "Digitoxin" and specific antibodies to these substances, have made possible the measurement of these substances in the plasma of patients. Presented is the result of an attempt to evaluate the usefulness of these measurements. For the purpose of this study, the evaluation will be broken down into three main topics: Clinical usefulness; laboratory feasibility, reproducibility, and reliability; economic feasibility.

Laboratory Controls

At the time this project was begun, there were no

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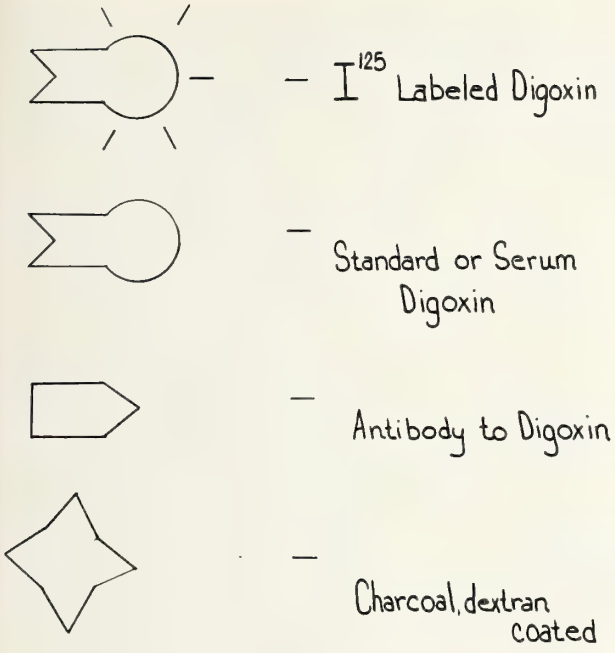


Figure 1

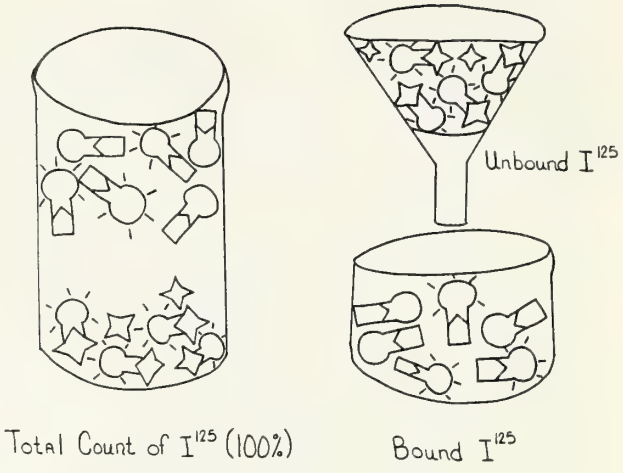


Figure 2

commercially available control preparations. Since then, several brands have been placed on the market. Two of these were tested and discarded because of apparent lack of reproducibility. It was decided to prepare our own controls by adding a suitable amount of digoxin and digitoxin to plasma pools obtained as a result of pooling plasma collected in the laboratory in the course of routine diagnostic laboratory screening tests. In addition to these laboratory controls, studies were also taken to reconfirm the best time to draw the sample from the patient. Previous studies[3] indicated maximum effective levels were reached four hours after intravenous injection of digoxin. As most patients in this series received oral medication, several examinations were performed in several cases and indicated that peak plasma levels were reached four hours after oral ingestion of the digoxin. It was also confirmed that digitoxin levels remained relatively stable and unvaried. Therefore, all samples were collected four hours after oral administration (especially digoxin). After collection, the sample was immediately spun down and the plasma separated. If the assay was not performed at that time, the plasma was frozen and preserved at –20C.

The preservation of samples for radioimmunoassay by freezing is a widely accepted practice, but in order to confirm that the level of digitalis was preserved, a series of patients had aliquots of plasma frozen and rethawed at 4-, 28-, and 52-hour intervals. As seen in *Figure 7,* there is apparently good reproducibility of the plasma levels after the freeze-thaw process.

Clinical Usefulness

The results of the assay were reported to the clinician on the request form *(Figure 4).* The clinician then made additional notes on this form as to the diagnosis and what action, if any, was taken at that time. In the retrospective evaluation, all three authors of this paper reviewed the medical record of the patient and, with the knowledge of the eventual outcome of the case, made additional notes.

Of the 42 patients included in this study, there were 11 patients in whom an initial diagnosis or action was taken at the time the report was received by the clinician. Of these 11 cases, there were 3 cases of digoxin intoxication, 4 cases of digitoxin intoxication, 3 cases of undermedication with digoxin, and 1 case of undermedication with digitoxin. Adjustment of dosages resulted in improvement of the clinical status of all these patients, and resulted in some cases a differential diagnosis. In addition to these 11 patients, there were two other patients of note. In these two cases, the laboratory determination indicated therapeutic, not toxic, levels of digitalis medication, but a clinical diagnosis of intoxication was made on the basis of other symptoms. In both of these instances, later developments vindicated the laboratory results and explained the symptomatology on the basis of acute cholecystitis in one case, and of carcinoma in the other case.

In this particular series, the acceptance of the laboratory data as valid resulted in the resolution of the problem in differential diagnosis in 11 of the 42 patients (25%). If the data of the other two cases cited had been used as a basis for decision-making, the percentage would have been 29 per cent. In a recent study, Beller *et al.*[4] indicated that 7 to 23 per cent of all hospitalized patients treated for cardiac glucosides experienced some degree of toxicity, and the mortality rate of toxic pa-

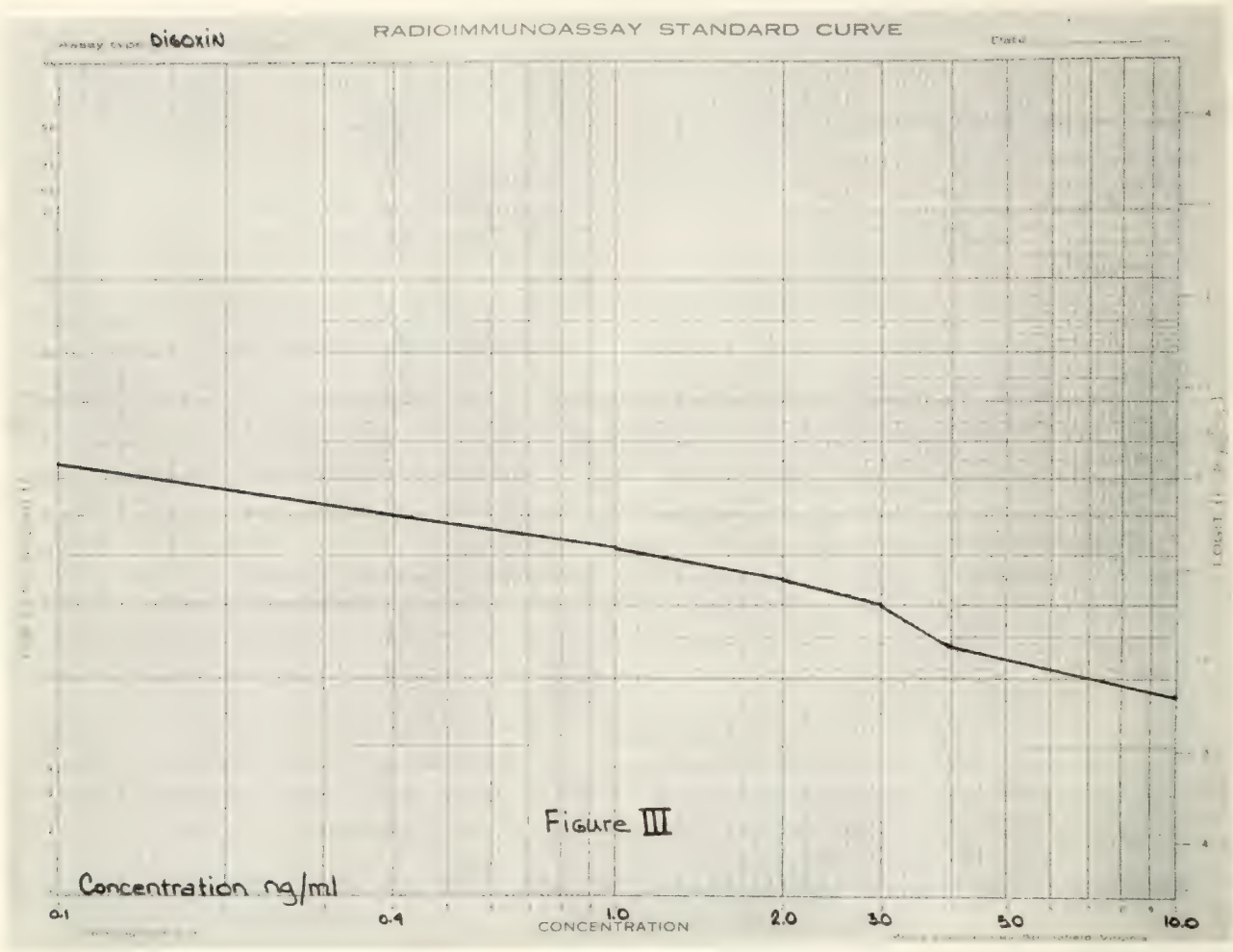


Figure 3

Name ..... Hospital No. .....
Physician ..... Room No. .....
Clinic No. ..... Date .....

Brief History (pulse, GI symptoms, etc.)

EKG:

Electrolytes:

Digitalis prep and dosage (date and time of last oral dose):
A) Digoxin .....
B) Digitoxin .....
Date and time blood drawn .....
Date and time test performed .....
Blood level of:
A) Digoxin .....
B) Digitoxin .....
Signature .....

Figure 4

Dose (mg/day)	*Mean Level*	*Range*
NONTOXIC SERUM DIGOXIN LEVELS[1]		
0.25	1.1 ± 0.3 ng/ml	0.8 – 1.6 ng/ml
0.50	1.4 ± 0.4 ng/ml	0.9 – 2.4 ng/ml
TOXIC LEVELS		
	3.3 ± 1.5 ng/ml	2.1 – 8.7 ng/ml

Figure 5

DIGITOXIN LEVELS[2]

	Mean Level	*Range*
Therapeutic	17 ± 8 (standard deviation) ng/ml	3 – 39 ng/ml
Toxic	34 ± 6 (standard deviation) ng/ml	26 – 43 ng/ml
Overlap	26 – 39 ng/ml	

Figure 6

EFFECT OF FROZEN STORAGE ON DIGOXIN TESTING

Patient	*+4 Hours*	*+28 Hours*	*+52 Hours*
B	1.0	0.8	1.05
S	0.3	0.3	0.42
W	0.4	0.4	0.6

Results in nanograms per ml.

Figure 7

tients is more than twice that of nontoxic patients. If the laboratory detection and confirmation of these toxic patients can be obtained early and promptly, this information will be of great clinical and therapeutic value, and may possibly reduce the overall mortality rate.

A further general indication for the use of these tests is the finding that the administration of different brands of cardiac glucosides results in different levels in the serum or plasma.[4] This problem, labeled bio-availability, is under investigation and scrutiny at the present time by the Food and Drug Administration.[5]

Laboratory Feasibility, Reproducibility, and Reliability

The methodologies as described here and as employed in the original study in this institution do have serious drawbacks. The performance of the test requires a high level of technical expertise and in this institution it was necessary to assign the most talented and superior technicians to the performance of this test. The absence of reliable commercial controls and the apparent differences in different brands of commercial digitalis used to prepare our own controls resulted in numerous difficulties. In spite of the most careful performance of the test, in many instances, either the controls were unacceptable, or the curve or line obtained from plotting the standards were of such quality that it was necessary to repeat the entire run. This is especially true in the case of digitoxin. In spite of these drawbacks, this study does indicate that at least 25 per cent of the diagnostic problems in underdosage or overdosage were satisfactorily and correctly resolved by the application of this laboratory methodology.

Since this study was performed, a methodology involving the use of test tubes previously coated with antibody to digoxin has been released. Our preliminary evaluation of this kit indicates that it is superior in both relative ease of performance and precision. Using this kit, it is possible to do the total assay in 60 to 80 minutes. It is hoped that a similar kit for the measurement of digitoxin levels will be shortly forthcoming.

DIGOXIN TEST COST

Radioisotope and Material	$.40	Per tube
Equipment	.40	
Labor	.40	

To perform a *single* test, 20 tubes are needed.

Cost of a single test = $24.00

However, only two tubes more are needed for each additional test.

Therefore, cost per test is as follows:

2 tests	$13.20
3 tests	9.60
10 tests	4.56
20 tests	3.48

Figure 8

Economic Feasibility

All standards, blanks, controls, and unknowns are performed in duplicate in this test. In order to set up the standard curve, which must be set up every time the test is performed, 18 tubes are required. *Figure 8* demonstrates the relatively high cost if a single or immediate determination is made. If the test can be batched by freezing plasma samples until several tests are requested, the unit price falls rapidly.

Summary

This study would indicate that the more-or-less routine performance of serum or plasma digoxin and digitoxin levels was of value in resolving problems with either overdose and toxicity or under-medication with these drugs. The solution of this diagnostic problem is of great enough importance to warrant the use of the complicated and cumbersome methodologies and the cost, especially if the test can be made routine and batched. In addition, the recent use of the prepared antibody-coated tube promises to greatly simplify the methodology and bring this test to within the reach of the average small or medium sized clinic or hospital laboratory.

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Neutropenia

Therapy With Penicillin and Its Congeners

DONALD A. ROMIG, M.D., CHIEN LIU, M.D. ***and***
D. W. VOTH, M.D., *Kansas City, Kansas*

AMPICILLIN has been used successfully in the treatment of a variety of infections since its introduction in 1951. Respiratory, urinary, central nervous system, gastrointestinal, and endocarditis disorders yielded to ampicillin therapy.[1-8]

A congener, hetacillin, can be prepared by the reaction of acetone with ampicillin.[9] In vitro, hetacillin has the same antimicrobial spectrum and potency as ampicillin.[10]

As hematologic abnormalities associated with the penicillin compounds are uncommon,[11-14] it is important to illustrate these abnormalities when they are observed.

Case Report

It was the first KUMC admission for the 2-year-old black female, who entered the hospital with the chief complaint of pain and swelling in the left elbow, and fever of four days duration. On May 14, the patient had fallen, apparently injuring her left arm. Because of persistent pain and swelling, she was seen in the emergency room two days later, where x-rays of the left elbow revealed no bony pathology. A right-angle elbow splint and sling for immobilization were prescribed at that time. The pain and edema continued and temperature elevation was noted later the same day. Restlessness and anorexia subsequently developed and she was returned to the emergency room and admitted to KUMC on May 18.

Past history revealed a term birth, breech delivery, and all immunizations were up to date. No medications had been administered recently. Examination revealed a 2-year-old female resting comfortably after sedation with chloral hydrate, pulse rate of 180 beats per minute, and rectal temperature of 105F (40.6C). The neck was supple. Tachycardia was noted but no murmurs were heard. The chest was clear. Examination of the extremities revealed an edematous left elbow which was inflamed and warm to the touch. There was no evidence of trauma, except for the 1-cm area of inflammation on the left lateral condyle. By needle aspiration of the elbow, 7 ml of light green purulent exudate was obtained. Crystalline penicillin, 1.5 million units, was injected directly into the joint space at the time of this initial tap. *Hemophilus influenzae,* type B, sensitive to cephalothin, ampicillin, tetracycline and chloramphenicol, was cultured in large number.

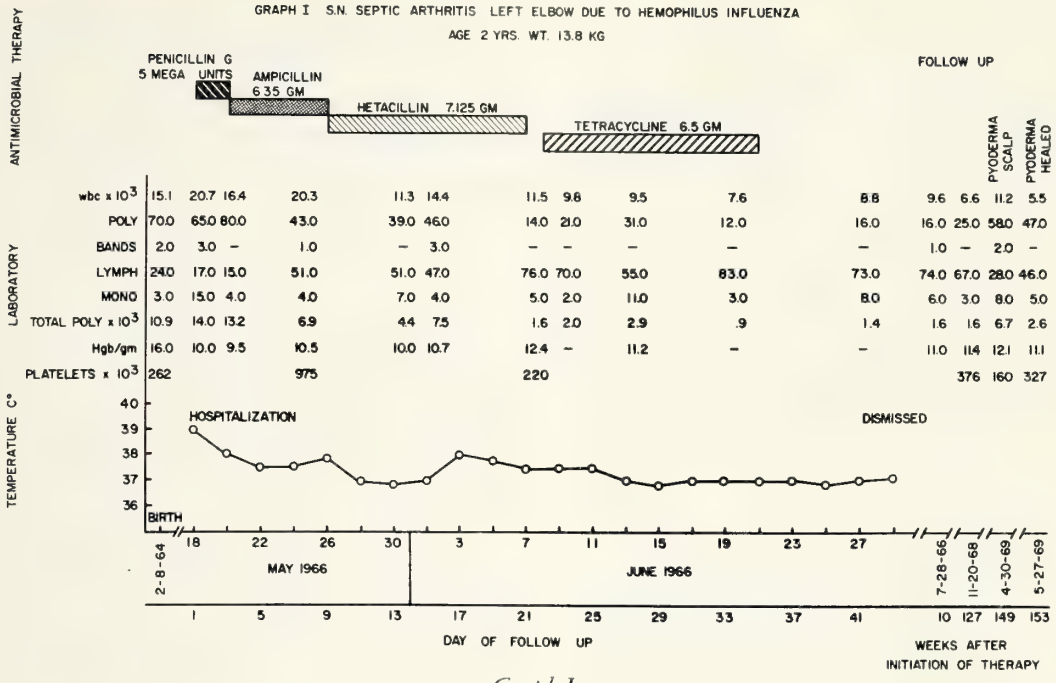
Pertinent laboratory data are recorded in *Graph I.* A Cutler sedimentation rate on June 3, revealed 2, 11, 18 and 22, in 15, 30, 45, and 60 minutes respectively. The SGOT was 52 units, which dropped to 38 units two weeks later.

Neutropenia that appeared after eight days of penicillin G and ampicillin therapy is described. It continued and worsened when hetacillin therapy was instituted.

Crystalline penicillin, 2.5 million units over a 12-hour period, was given intravenously, and by the second day, the patient was improved. She continued to have daily temperature spikes. Penicillin G therapy was continued until May 19, when the cultures from joint fluid revealed growth of *Hemophilus influenzae.* Therapy was then changed to 150 mg ampicillin given intravenously every three hours (dose of 87 mg/kg/day). Ampicillin was continued at dosages between 22 and 100 mg/kg/day until May 26, when hetacillin therapy was started. On May 26, a bloody aspirate from the left elbow was sterile. Hetacillin suspension, 125 mg orally every six hours, was administered and the ampicillin was discontinued. On June 1, hetacillin tablets, 125 mg, chewable, were begun concurrently with hetacillin suspension, and the chewable tablets were continued until June 9. The hetacillin suspension was discontinued on June 3, as the chewable tablets seemed more palatable. Subsequently, tetracycline, 125 mg every six hours, was administered orally and was continued until June 25. *Graph I* depicts hospital course, pertinent laboratory data, fever course, and antibiotics.

Since her discharge from the hospital on June 11, the

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Graph I

patient remained asymptomatic in reference to her joint problems. Three years later, the patient experienced an episode of pyoderma of the scalp. The white blood cell (WBC) count at that time was 11,200/cu mm, and a moderate shift to the left was noted. She seemed to respond to this infection appropriately, and only vigorous local treatment with soap and water was prescribed. Fourteen days after this had healed, WBC count was 5,520/cu mm, with 47 per cent polymorphonuclear leucocytes, no bands, 46 per cent lymphocytes, and 5 per cent monocytes. Hemoglobin was 11.1 gm/100 ml, and platelet count was 327,000/cu mm. An examination of the bone marrow was not done.

Discussion

Because of the similarity in action and potency of hetacillin and ampicillin,[15] and the evidence that ampicillin is the active principle in vivo,[10] one would suppose the toxicity and side effects of ampicillin and hetacillin to be similar. Graf and Tarlov[11] have described agranulocytosis with mono-histiocytosis associated with ampicillin therapy. A report by McElfresh and Huang[12] has associated bone marrow depression with methicillin administration. Additionally, Reyes, *et al.*[13] have reported granulocytopenia with carbenicillin administration.

Hogan, *et al.*[16] in their evaluation of hetacillin, describe slight alterations in the hemogram. One patient had transient leukopenia of 3,900/cu mm WBC, while two others demonstrated relative eosinophilia of 6 per cent or greater. There is no followup data in their report to indicate that these had spontaneous recovery. No hematologic abnormalities were documented in the evaluation of hetacillin by DeFelice, *et al.*[17]

Most drugs shown to be associated with agranulocytosis have a benzene ring with a closely attached amino group. The mechanism involved may differ with different drugs, as the time of development of agranulocytosis differs from immediate to prolonged or delayed response.

DeFelice, *et al.*[17] discuss the side effects as well as the toxicity of hetacillin in normal volunteers. They describe the diarrhea and occult blood in the stool; the diarrhea was mild and did not interfere with daily living routine and entirely subsided by the third week of drug administration. They ascribe the toxicity or the side effects to gastrointestinal irritation, as there was occult blood in the stool. The side effects were only apparent when 4 gm or more of hetacillin was given daily. The safety and side effects of 2 gm of hetacillin daily were indistinguishable from the placebo. Routine toxicity studies reveal no abnormalities that could be attributed directly to hetacillin therapy.

Various skin reactions, including contact dermatitis, angioedema, glossitis, stomatitis, drug fever and serum sickness, as well as anaphylaxis, may complicate the use of penicillin. None of these have been reported with hetacillin, perhaps because of lesser usage. Unusual reactions, such as purpura, pericarditis and hematemesis, have also been described. Additionally, penicillin has been documented to cause Coomb's positive hemolytic anemia.[18]

Summary

Neutropenia occurred in a 2-year-old black female treated with Penicillin G and ampicillin for a *Hemophilus influenzae* infection of the elbow joint. Subsequent therapy with hetacillin was instituted and a worsening of the neutropenia developed. The neutropenia persisted for two years after completion of therapy. However, the patient responded to a skin infection with a modest increase in the WBC count and a left shift in the differential count. Subsequent resting WBC counts still show a relative shift to the right. The precise mechanism by which members of the penicillin family can produce this reaction in the hemogram is unknown.

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Pediatric Nurse Associate

A New Dimension in Pediatric Cardiology

LESLIE BOWLES, R.N.* ***and*** **ANTONI M. DIEHL, M.D.,****

Kansas City, Kansas

COLLABORATIVE EFFORTS are essential to increase the quality, availability, and accessibility of child health care. It is essential, in order to meet the health care needs of children, that skills inherent in the medical and nursing professions be utilized more efficiently in the delivery of health care to children. A new approach to the utilization of these professional skills is the development of Pediatric Nurse Associate (PNA) and Practitioner programs. Nurses are able to broaden their knowledge and skills in the area of child health, particularly in the ambulatory area, thus expanding their responsibilities to include some of the areas that have traditionally been performed by physicians.[1]

There are procedures and problems of judgment in medical care today which cannot be clearly designated as solely medical or solely nursing, but rather, they are part of a continuum. At one end of the spectrum are tasks which only a highly trained physician can perform adequately; at the other end are tasks, generally considered to be of a nursing nature, which can be done adequately by persons with no professional education whatever. Between these two extremes is a growing body of responsibilities which can be carried out by physicians or by nurses.

The PNA is a new type of primary health care provider playing an intermediate role. A sharing of responsibilities and decision-making takes place which previously was reserved to the pediatrician. This necessitates a high degree of collaboration, interdependency, and communication.[2]

Training

Pediatric Nurse Associate training programs are available throughout the United States; two are in the Kansas City area. These programs, through 12 months of clinical and didactic training, are designed to teach nurses to meet the needs for additional manpower. Enrollees learn to provide comprehensive well child care and identify, appraise, and carry out initial management of many acute and chronic conditions of the sick child. Complete histories are taken and comprehensive physical examinations are performed. In addition, these nurses carry out necessary immunizations, evaluate hearing, speech and vision, determine developmental status, perform laboratory tests, evaluate and manage common problems of healthy children and those with minor illnesses, including the counseling of parents and assisting in the management of emergencies.[3]

The role of the Pediatric Cardiology Nurse Associate, a new dimension in health care for children, is defined.

Role Development

The pediatric cardiology nurse associate is a new, challenging, and unique role for a nurse. The senior author joined the team of pediatric cardiologists at the University of Kansas Medical Center August 1, 1973, upon completion of her formal training as a PNA. On-the-job training began for the types of duties and responsibilities specific to the role of the Pediatric Cardiology Nurse Associate (PCNA).

Initially, time was spent becoming acquainted with daily routines. The PCNA attended daily morning teaching rounds conducted by the staff cardiologist on the inpatient service for medical students and pediatric house staff officers. This included reviewing chest roentgenograms and charts, and examining each patient on the pediatric cardiology service. Cardiac catheterizations were observed, and the PNCA attended the combined pediatric cardiology-surgical cardiology catheterization review conferences, the electrocardiography interpretation sessions, and participated in various other conferences and meetings, including the weekly journal club-seminar. Reading, self-education, and studying in the library were mandatory. As more experience was acquired, the PCNA gradually became more proficient in taking a complete cardiac history and performing the physical examination, using the basic skills of inspec-

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tion, palpation, and auscultation. Decisions as to patient management in diagnosis, prognosis, and therapy were participated in by the PCNA.

To further aid in the process of role definition, the PCNA spent three days at the University of Iowa with the three pediatric cardiology clinical associates at that cardiac center. All of the latter individuals were trained by the pediatric cardiologists at that hospital.[4]

Duties and Responsibilities

There is a wide range of responsibilities for the PCNA at the University of Kansas Medical Center. She assists in the pediatric cardiology outpatient clinic four mornings a week. Following introduction to the parents as the pediatric cardiology nurse associate, she takes a complete history with particular reference to the cardiovascular system, performs the physical examination, and then presents and discusses the child's case in detail with the staff pediatric cardiologist. The chest roentgenogram and electrocardiogram are reviewed and interpreted. Together, the PCNA and staff pediatric cardiologist discuss the diagnosis and management with the parents. Details of laboratory tests and additional diagnostic studies are discussed by the PCNA, and questions answered. The staff physician is always available for additional professional input.

The PCNA has initiated a questionnaire designed to assess parent-patient satisfaction with the pediatric cardiology outpatient clinics and to determine the degree of understanding by the parents of their child's heart disease and relevant factors involved. The purpose of this is to provide the team of pediatric cardiologists with direct feedback from their patients and parents concerning their services and communications. Also, the information gathered will provide the groundwork on which the pediatric cardiologists and the PCNA can base instructional material for parents concerning each child's heart disease.

The PCNA is also involved in a clinical research study on familial Type II hyperlipoproteinemia. The purpose of the project is to determine if it is possible to detect familial Type II hyperlipoproteinemia from measurements on the cord blood of the newborn, and to obtain preliminary information as to the incidence of this condition. The PCNA is responsible for contacting the parents of each patient in the study, and for the setting up of clinic appointments for them at which time she gathers the information needed for the study through history-taking and physical examination. The PCNA then arranges for followup evaluation on each patient when indicated, sends reports to the patient's pediatrician when appropriate, and communicates to the parents the outcome of the studies performed on their child. One morning a week is spent making teaching rounds with students enrolled in the Family Nurse Practitioner Program at the University of Kansas Medical Center.

The PCNA is responsible for making referrals to community health nurses who make followup visits in the homes of pediatric patients with heart disease. At the time of the patient's discharge from the hospital, the PCNA reviews with the visiting nurse the patient's medications, instructions on discharge orders prescribed by the physician, and relevant cardiac symptomatology which may require consideration by the cardiologists. Following each home visit, the PCNA is contacted by telephone by the visiting nurse who reports the patient's condition, discusses the patient's response to therapy, and gives advice and recommendations for future followup visits. The PCNA is thus responsible for relating significant information to the pediatric cardiologists for supervision of treatment, for recommendations, and coordination of care.

The PCNA also works with staff nurses on the pediatric floors to assist in the coordination of the care delegated to the nurses by the physicians on the pediatric cardiology service. She acts as an intermediary to give feedback to the pediatric cardiologists as to their patients' therapy along with other relevant information which can provide for continuity in patient care. Ongoing education of the family and patient about the specific cardiac defect, the prognosis and treatment, indications for cardiac catheterization, and what can be expected from cardiac surgery augment the physician's discussions. Anticipatory guidance is given for special problems specifically related to bacterial endocarditis prophylaxis and activity restrictions, if any.

Future Plans

As the pediatric cardiology nurse associate's role becomes more clearly delineated, other tasks will be undertaken. Such plans will include serving as a consultant to general pediatric clinics with backup confirmation by the staff pediatric cardiologist. With increasing knowledge, more extensive teaching of the parents during outpatient visits will be included. Area hospitals will be visited to enhance the knowledge of nurses and paramedical personnel working in newborn nurseries as to the early recognition of serious congenital heart disease. County school nurses will be contacted to further their knowledge in pediatric cardiology. Presentations will be made with film supplementation to help in the education of school children of all ages to make them more aware of the current methods available for the prevention and treatment of heart disease. Community programs for screening of children who are potential cardiac cases will be initiated and will include identification of high-

(Continued on page 16)



Medical HISTORY

Nathan Smith Davis: Medical Educator

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NATHAN SMITH DAVIS (1817-1904) was one of the giants in the influence on the evolution of medical education in this country. Although we are presently seeing a discarding of the traditional technique and implementation of new approaches to teaching the future physicians in our medical schools, we should remember that change in medical education is not a recent event. It began on a much grander scale over 100 years ago.

Nathan Smith Davis was born in rural New York State, and after a rugged childhood began his study of medicine as an apprentice at age 17. This early preceptorship was followed by a course of medicine at The College of Physicians and Surgeons of Western New York, Fairfield, New York. This course lasted only four months, and was repeated three times over a three year period. The remaining eight months of each year were spent in the office of a local physician.

After a short time in the practice of medicine, Davis spent a number of years studying, lecturing, and polishing his skills as a medical organizer and educator in the local medical societies in New York. Ten years after his short stint in practice, he returned to New York City, but continued his teaching in a position at The College of Physicians and Surgeons, and was editor of the *Annalist.* After two years, Davis moved to Chicago to the newly formed Rush Medical College.

Over a ten-year tenure at Rush, Davis slowly formulated his thoughts on medical education to make it a more meaningful experience, but found he could not implement his ideas at that institution. Thus, in 1859, he left Rush and joined with six other farsighted men to organize a new school. By today's standards of revolution in medical education and building of new schools, this does not sound like a great feat, but one should remember this was 115 years ago, and an entirely different atmosphere in medicine prevailed.

It was 1859 and James Buchanan, the only bachelor to hold that office, was President of the United States. There were now 33 states with a population of about 31 million people. It was only a year since the opening of the first transatlantic cable, and the beginning of the Overland Mail Service to the Pacific Coast. The first oil well had been drilled, and the life expectation of a child born in the United States that year was about 40 years. In medicine, Virchow's *Cellular Pathology* was one year old, and it was the year of Darwin's *Origin of the Species.*

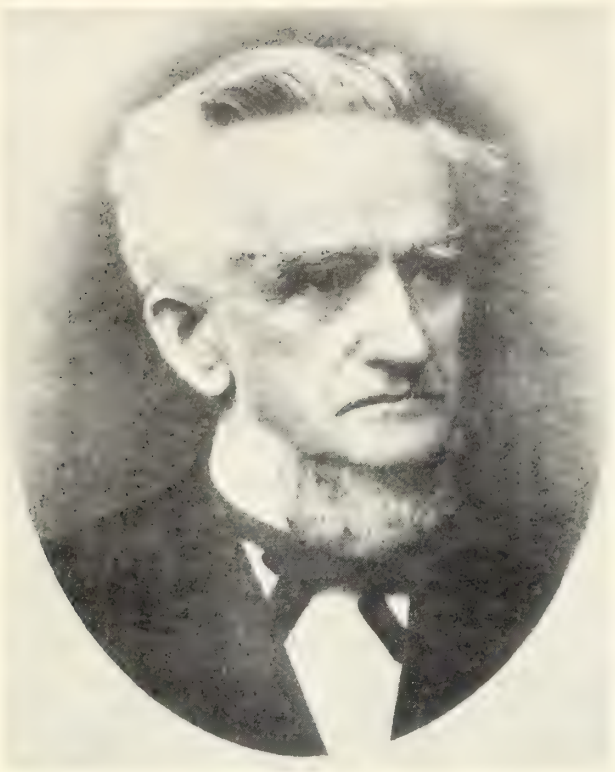
The first and only medical institution on this continent designed exclusively for children was the Children's Hospital of Philadelphia, which was in the fourth year of its existence.

In Chicago, a city of about 100,000, a new day was dawning in medicine; seven men were founding a new medical school, a school which would become Northwestern University Medical School.

But, this was not merely another school of medicine, for that would have been no great contribution to medicine. This was a revolution of medicine—a new medicine.

In 1859, the state of medicine and medical training in this country was very poor indeed. The first physicians had come to this country in 1619, with the first settlers at Jamestown. Only a few physicians who were considered competent are mentioned in the historical writings of the early 1700s; some of these were political leaders and others were religious leaders. There was a great shortage of competent physicians in the colonies, even though physicians of questionable competence were available as a result of the apprentice system. The only properly trained physicians were those from Europe who chose to come to the colonies (and the caliber of such men was not always high), and those people in the colonies who chose to travel to Europe for medical edu-

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Nathan Smith Davis

cation. Unfortunately, the travel expense proved prohibitive, and few realized the necessity of this better education.

The first medical school in this country was the Medical College of Philadelphia, established in 1765, and shortly followed, in 1767, by King's College Medical Department. These were greatly needed institutions. During the colonial period, the future physician served an apprenticeship with some physician for a fee for a period of three to seven years. The duties were far from educational. The aim of the early medical schools was to provide a rapid study of medicine, and was not intended to supersede the preceptorship just mentioned. At first, the medical college offered a degree of Bachelor of Medicine at the end of a series of lectures, and the MD degree followed a number of years later when the same course was repeated, a thesis prepared, and an examination passed. Most students took the series of lectures only once. During the Revolutionary War, even these poor facilities did not function. The Bachelor's degree was abandoned by all colleges between 1789 and 1813, and the course became the shortest term possible in order to attract more students and encourage repetition of the course another time. Most students did not repeat the course. Although these schools had started with high requirements, during this period all such entrance requirements were abandoned.

In 1850, there were 36 medical schools, but the increase in number that existed in this decade still did not raise the level of education of the physician above description of inadequate. The schools had no entrance requirements, the majority had no hospital teaching, and a substantial number had no dissection; and even in those with dissection, there was no other laboratory work. The term of such education ranged from less than 16 weeks to 6 months; the majority had a 16-week term. There were no examinations unless one wanted to qualify for the doctoral diploma after a repetitive "second course," and these examinations were cursory and superficial. One could begin such a 16-week course any time before the middle of the term, and those who left when three-quarters of the term was over could receive full credit for the term. Furthermore, attendance was not taken. The medical colleges tended to lower standards to attract students; this included shortening the term to 12 weeks, and lowering fees and requirements. To further degrade the medical teaching, the rise of such medical schools resulted in a cessation of the apprenticeship plan. Thus, the shortened medical college course now represented the only education for the physician.

Arey classifies the development of medical education in America into three phases: (1) preceptorial training only (lasting 145 years, 1620-1765), ending with the first medical school; (2) institutional instruction as a supplement to apprenticeship with a preceptor; and (3) beginning late in the 19th century when even the token role of the preceptor was abandoned and institutional instruction became the only instruction.

Rush Medical College, chartered in 1837 and first opened in 1843, was the only medical college in Chicago. It had opened with prophecy of greatness by its President, Dr. Brainard. Unfortunately, it was not unlike the other medical colleges and indeed lacked the quality of vision. Changes in medical education were bitterly opposed by its leader.

Unsatisfied with the state of medical education, seven physicians founded a medical school with higher standards and quality than had been seen before in the Americas. These founders were Nathan Smith Davis, Hosmer Allen Johnson, Edmund Andrews, William Heath Byford, John Hamilcar Hollister, Ralph Nelson Isham, and David Rutter.

Dr. Franklin H. Martin spoke the following about the founders:

> The six young men, full of youthful courage and enthusiasm and fired with the glory of a new ideal, determined to embark upon a great adventure, an adventure which meant the founding of a new medical school and the revolutionizing of the methods of medical teaching the country over. It was no mean decision which the young

men were called upon to make, for failure spelled for them disaster—financial, social and professional. But they did not fail.

David Rutter was active only during the planning and the first term, so that Martin speaks only of the "six" principal founders.

In the Founder's Day Address at Northwestern University Medical School in 1933, Dr. Loyal Davis summed up this new school:

This was the first medical school in the United States to require a three-year graded course, and the first school to be founded and run for the benefit of the medical student and the public. In addition to enforcing higher preliminary standards of education it was one of the first medical schools to introduce clinical instruction in hospitals and in an outpatient department; and one of the first to introduce laboratory instruction in other fundamental sciences besides anatomy. Thus at its very beginning the medical school instituted an innovation in teaching methods. It was then condemned by conservative minds; and it was not until twelve years later that this system was adopted by Harvard, and subsequently, by all medical schools. Thus began a revolution in the teaching of medicine in America. This tradition is as great as that possessed by any medical schools in this country.

The first term of this new medical school, the medical department of Lind University, began in 1859 with a faculty of 12; most schools had faculties ranging from three to nine. The men who formed this first faculty were:

David Rutter, M.D., Emeritus Professor of Obstetrics and Diseases of Women; Titus DeVille, M.D., Professor of Descriptive Anatomy; John H. Hollister, M.D., Professor of Physiology and Histology; Hosmer A. Johnson, M.D., Professor of Materia Medica and General Therapeutics; M. K. Taylor, M.D., Professor of General Pathology and Public Hygiene; Frederick Mahla, Ph.D., Lecturer on Inorganic Chemistry and on Organic Chemistry and Toxicology; Edmund Andrews, M.D., Professor of Principles and Practice of Surgery and of Clinical Surgery; Ralph N. Isham, M.D., Professor of Surgical Anatomy and Operations of Surgery; William H. Byford, M.D., Professor of Obstetrics and Diseases of Women and Children; Nathan S. Davis, M.D., Professor of Principles and Practices of Medicine and of Clinical Medicine; Henry G. Spafford, Esq., Professor of Medical Jurisprudence; Horace Wardner, M.D., Demonstrator of Anatomy.

The term was to run from October to March, and each college term would consist of two "departments" carried on simultaneously. The first, Junior Department, included courses of descriptive anatomy, physiology and histology, materia medica and general therapeutics, general pathology and public hygiene, inorganic chemistry, and practical anatomy. All students had a final examination in each course. The second, Senior Department, included courses in principles and practice of surgery, surgical anatomy, obstetrics and diseases of women and children, practice of medicine, organic chemistry and toxicology, medical jurisprudence, clinical medicine and surgery in the hospital, and dissection. There were daily and final examinations.

The clinics were to illustrate medicine and surgery, pathology and diagnosis, and were open to both Junior and Senior Department students. They were also open to all students in a third year's course.

Requirements for graduation were satisfactory "certificate for having pursued the study of medicine and surgery three years," and being 21 years old and of good moral character. All courses were required, including the clinical studies and dissection; a thesis was also required.

The new medical school existed as the Medical Department of Lind University from 1859 to 1863, and as the Chicago Medical College from 1863 to 1870. After that it was known as Chicago Medical College, the Medical Department of Northwestern University from 1870 to 1891. In 1891, the ties were made stronger, and the school became Northwestern University Medical School, still with its own charter and the right to retain the name Chicago Medical College, in brackets. In 1906, the charter was surrendered, and the medical school became an integral part of Northwestern University.

Davis remained at "his" school for the remainder of his professional life as Professor and Dean (actually as President 1866 to 1870, and Dean 1870 to 1898, although the position was the same), and infused it with innovations during the last part of the 19th century. His duties as lecturer, administrator, author (well over 100 articles, a number of books), editor (eight periodicals including the *Chicago Medical Examiner* and the *Journal of the AMA*, both of which he was instrumental in founding), and physician did not daunt his efforts to spread his influence on medical education nationally.

Two of his books were related to medical education. One, "History of Medical Education and Institutions in the United States," was written in 1851 prior to founding of the new medical school. Four years later, he wrote "A History of the American Medical Association," which described the founding of that organization and its role in improving medicine.

Davis has been described as the father of the AMA. It was he who recommended that a national meeting of delegates be convened to improve the standards of medical education. He was then chosen as leader of a group to bring into being this "convention." He led in the task of organizing physicians, medical societies, and schools from the entire country and, in 1846, a preliminary national meeting was held in New York. At this meeting, Davis recommended the institution of a national medical association and was a member of the

final group which founded that body. In 1847, the American Medical Association was born. Davis was its President during the War Between the States, and later was editor of the *Journal of the American Medical Association.*

There were, of course, many more minor contributions to medical education—founding local and state medical societies, influence nationwide in medical teaching both by personal permission, organization, and by example in lectures, and his large texts on medicine ("Lecture on the Principle and Practice of Medicine," 1884).

Dr. Davis died in 1904, at age 88, remaining active in medical education and medical practice until that time. It is true that in his later years he did not provide the innovative leadership that he had in his earlier days. Yet, the impact of Dr. Davis on medicine—how it is learned and practiced, its organization nationally—is mammoth.

Although medicine is still undergoing great change in how it is taught, the time when medical education could be totally revolutionized no longer exists. That challenge did exist over 100 years ago, however, and Nathan Smith Davis left an indelible mark in meeting it.

Acknowledgment

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Mr. William Beatty and Miss G. Price allowed the use of the historical facilities at the Northwestern University Medical School Library.

Pediatric Nurse Associate

(Continued from page 12)

risk factors, such as hypertension, obesity, and cigarette smoking. The PCNA expects to become involved in the education of other health team members, including medical students, staff and public health and school nurses, as well as nursing students.

Summary

The Pediatric Cardiology Nurse Associate is becoming a new dimension in health care for children. Her role is being defined and will need to be altered to meet the needs of parents, pediatric cardiologists, and primary physicians. However, it is already clear that the PCNA does supplement the health care team in patient care, professional and lay education, and clinical research.

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Mark Your Calendar Today!

116th KMS ANNUAL SESSION

May 4-7, 1975 Glenwood Manor Overland Park

The President's Message

Frustration, anger . . . predictable . . . Portland.

In Anaheim, California, in the fall of 1973, the House of Delegates and the Board of Trustees of the AMA took a beating from both proponents and opponents of PSRO, this especially during the day-long session in the reference committee hearing the PSRO proposals. The delegates leaving Anaheim (the opponents) were sure they had won the battle of rhetoric—and the proponents just as sure they had put their position across. The reference committee's report, and later the report of the House of Delegates, were both ambivalent. This left at least three interpretations of what really happened.

Between the Anaheim meeting and the House of Delegates meeting in Chicago many things did happen. The position of the AMA Board of Trustees changed from one of outright repeal to possible rebellion, and only in the last resort was the effort to amend the PSRO law compromised. Cooperation in implementing the law, and an effort to try to amend only the more restrictive parts of the law, is the latest decision. This position was established by a power play within the organizational structure together with superior parliamentary jockeying and maneuvering to obtain an advantageous position and to get a frustrated and divided House of Delegates to accept this change in position. Many delegates, near tears with anger, outrage, frustration and a feeling of being deceived, moved to the microphones to have their vote recorded as being in opposition. Equally frustrating was the organizational structure, involving the top brass of the AMA, who pushed to elevate Dr. James Sammons to the position of Executive Vice President. This, again, was accomplished only with severe division in the House of Delegates.

And again, about less than two weeks before going to Portland, the delegates were alerted that the AMA was in serious financial trouble: we would be $3 million in debt by the time of the meeting, and a $60 assessment and a $90 dues increase was necessary to keep the organization solvent. (By the time this is in print, you will have received your $60 assessment notice. An annual dues increase was rejected. A committee of the House will investigate the dues structure and make recommendations in June 1975).

Why have I told you all this? Only to give you some idea of the predictable temper of what the House of Delegates would be at the Portland session. I assure you, they truly lived up to predictions. Quoting from a report appearing in *Medicine & Health:*

In a meeting so racked with internal organizational problems that Professional Standards Review Organizations were virtually ignored, AMA's House of Delegates has thoroughly repudiated the Board of Trustees and its new executive secretariat. When the dust had settled . . . in Portland, Ore., delegates had temporarily rejected a proposed dues increase along with cutbacks on publications, councils and committees.

Plans to do away with drug advertising in AMA's publications were put in abeyance after state societies complained that the move would leave them and their journals in an awkward position. The delegates agreed to levy a one-time $60 assessment to pay off a $3 million debt that AMA has run up. But they put off until next June's convention a decision on a proposed dues increase.

The delegates turned down a proposed merger of AMA's Council on Legislation with the American Medical Political Action Committee, but let stand AMPAC plans to move into AMA's Chicago headquarters building. AMA has in the past carefully kept AMPAC separate from nonpolitical association activities.

Particularly galling to new Executive Vice President James Sammons, against whom much of the delegates' ire was directed, was a successful rebellion of the Interns and Residents Section whose members threatened to walk out unless their proposed reforms were accepted. Helping direct the young members' protest from a hotel room was Steve Passin who had just been fired by Sammons and his aides for activities in behalf of resident and intern rights.

An investigative committee of all activities of the AMA Board of Trustees was established early in the House deliberations. Again, an attempt was made to dissolve this committee as being contrary to the Constitution and Bylaws, which failed. This unnamed committee is to report to the next House of Delegates, the argument being that it is not the prerogative, nor the authority, nor the privilege of the House to form such a committee. In no uncertain terms, this House of Delegates gave the Board of Trustees some six to seven months to get the ship of the AMA back on course.

We need the organizational structure, expertise, and know-how of the large number of totally dedicated employees to the cause of medicine within the AMA. I believe our Board of Trustees are wholly dedicated to the cause of medicine. They have made many judgmental errors, but I believe they have the capacity to learn from these errors.

There is a little of Archie Bunker in all of us. This was only too apparent at the AMA.

John Blume

President



Editorial COMMENT

Fuel Crisis

(Editors' Note: Heedwel Unlimited is a conglomerate which concentrates on providing services and equipment to special interest groups. Financial observers have been watching it for some time, not only because of its phenomenal growth in recent years but because they consider it a bellwether of socioeconomic trends. So far, it has catered to the elderly and poverty market but observers, usually conservative in their estimates, see no reason why it shouldn't eventually command the birth-to-earth market. Our Washington correspondent, Frumious O. Bandersnatch, has forwarded the following firsthand report.)

In the face of the fuel crisis, Heedwel Unlimited has announced plans for the promotion of a line of cheap fuels which it expects—but won't say for publication—to change the entire fuel picture. It claims to have about 20 different fuels as good as (they say identical to) and much cheaper than the name brands now available. They claim to have a couple of hundred under study and it's no secret they'd like to corner the whole field.

Heedwel's plans have been talked about behind the scenes for some years but this is the first look the public has had in this venture. Heedwel spokesmen state frankly that they have been stimulated by consumer complaints about the distribution and cost of the name brand fuels, and in their efforts have drawn heavily on the advice of some who are considered rank amateurs by old hands in the field. Heedwel, in its preliminary promotion, has made much of the huge profits shown by the fuel companies and claims that, once it gets into full production, all producers will have to get in line and the public will benefit by millions of dollars in savings.

The fuel industry has reacted with predictable vehemence, with attitudes ranging from scoffing to anger. It points out that Heedwel is strictly a promotional outfit, and its research branch (known as Foodra) has a long history of squabbling with the industry about their production methods. They are frankly bitter that Heedwel has to get the fuels it is promoting from those same producers and is counting on the fact that the patents have run out to offer them at reduced cost. They complain that they have supported the search for new sources of fuel and have provided the research that has led to their development. Now they're threatened by a group of promoters who are catching the public interest with misleading stories of great savings. Said one industry spokesman who asked not to be named, "I think the whole outfit is just a paper set-up. How can they keep going when they've never shown a profit? I'll tell you—the guys behind it have a rich uncle who keeps bailing them out. They wouldn't last 5 minutes if they really had to buck the market. And if they get the whole pie, as they hope, the public will find it's paying more than ever just to maintain the home office."

Another unnamed official commented, "What they're overlooking is that we have developed special additives that give our brand-name fuels their special quality. They claim the raw stuff will do the job, but we know it won't in the long run. Unfortunately, it will be the consumer's loss when his mileage suffers or his motor burns out." More than that, producers say, it will mean the end to the development of new fuels and that means the producers will go out of business. "What will Heedwell do when it can't get the raw stuff and doesn't have the know-how to produce it itself?," asked one representative who asked not to be identified.

Heedwel is apparently counting heavily on a unique distribution system in which a large number of local, independent distributors assess individual needs for fuel and authorize its procurement at individual service stations which pump Heedwel's fuel as well as that of the old line outfits. Most of these distributors have adopted a wait-and-see attitude, but there is an undercurrent of concern that they may be caught in a squeeze play. One distributor, asking that he not be named, said: "We're in the spot of determining the best fuel for the individual customer because we know our clientele well, but the main office says that as far as these special groups are concerned, we have to order only their fuels. If we order a name brand fuel, they'll cut us off unless *we* sign a certificate of need. How about that? If some knucklehead clerk in the Ivory Tower thinks our orders aren't justified, we'll probably have to pay for it ourselves." Another anonymous distributor was even more dismal.

"Just wait," he said, "next they'll corner all the fuels, then bring in other groups and then tell us what we can and can't do. We've always operated as independents but, mark my words, we'll all be under their thumbs completely one of these days." There may be something in what he says as there have been some rumblings in Congress to the effect that it's a Constitutional right for anyone to have any fuel he wants, and the race is heating up to see who can put across a national fuel procurement program. And Heedwel should be in a happy spot when they do.

It may not all be rosy for Heedwel, however. One of their engineers, who for obvious reasons didn't want to be named, noted: "I think they're making a big mistake. The whole scheme is based on studies performed on a specially-designed, carefully tuned engine. These administration guys think they can extrapolate from these results to all vehicles. They're going to find they don't get the same performance in some of these jalopies that are on the road nowadays. The bosses will come out smelling like a rose, though, and we'll take the rap. Guess that's why they're the bosses."

Service station operators, too, are pondering the effect the new outfit will have on their operations. "Guess it won't make me no never-mind," said one operator who refused to give his name. "We gotta do what the distributor says but one thing's for bleepin' sure—it'll mean more paper work. Always does." Another, who requested that his name be withheld, noted: "Dunno. Maybe a good thing. People all the time think we're making a killin'. The companies, maybe—not us—and if it shakes the companies up a bit, who knows? May be a good thing. I tell you one thing. We can't afford to wipe no windshields at the prices we get for this Heedwel stuff, or check tires. They don't pay for it, they don't get it, I allus say. Get what you pay for, I allus say."

There's been some talk among the distributors about organizing into some sort of group to present a united front in case more controls and restrictions are placed on them by Heedwel. Most observers discount this effect, however, since the distributors have always been notorious mavericks. Heedwel would probably be glad to get both the distributors and station operators under its control. "I'm not saying I favor such a thing," smiled one Heedwel official who emphasized he was not speaking officially, "but if it should come to pass, it would fit in with our game plan, and if it comes, we'll be ready."

One station operator refused any comment but while he was wiping my windshield (I got a name brand), he was heard to mutter, "There's no fuel like an oil fuel."

And that's the picture as I see it now—but don't quote me.—*F.O.B./D.E.G. (who'll admit to anything.)*

Information for Authors

Manuscript Preparation

Manuscripts must be typewritten, double spaced, leaving wide margins. Submit the original, plus one copy if possible.

Titles should be short, specific, and amenable to indexing. A subtitle is frequently used to keep the main title short.

Summary: All manuscripts should include a short abstract which is a factual (not descriptive) summary of the work.

Author Responsibility: The author is responsible for all statements made in his work, including changes made by the copy editor. Manuscripts are received with the explicit understanding that they are not simultaneously under consideration by any other publication. Publication elsewhere will be subsequently authorized at the discretion of the Editor.

Galley Proof: To make extensive changes in the article after the text has been set in type may require an additional cost which exceeds the original. The galley proof is for correction of ERRORS, and a rewriting of the article should be done on the original copy BEFORE it is submitted for publication.

Drugs should be called by their generic names; the trade names can be added in parentheses if they are considered important. All *units of measure* must be given in the metric system.

References

Bibliographic references should not exceed 20 in number, documenting key publications. Personal communications and unpublished data should not be included. References should be arranged according to the order of citation, and not alphabetically. All references must be numbered consecutively and all must be cited in the text. Use the style of the AMA publications, giving; name of author, title of article, name of periodical, volume, pages, year.

Illustrations

All material which cannot be set in type, such as photographs, line drawings, graphs, charts, tracings (for preparation of tables, see below) must be mounted on white cardboard. All must be identified on the back as to figure number, author's name, and an arrow indicating top. Legends should be typed double spaced on a separate sheet of paper, limited to a maximum of 30 words.

Drawings and graphs should be done professionally in India ink on illustration board or high grade white drawing paper.

Photographic material should be submitted in duplicate as high-contrast, glossy prints. Color illustrations will be accepted for publication only if the author assumes the cost.

THE JOURNAL will assume the cost of B/W engravings and cuts up to $35 (or 5 cuts). Engraving cost for illustrations in excess of $35 will be billed to the author.

Tables

Because tables are set by hand, their cost is comparable to illustrations. A reasonable number of tables are allowed without cost to the author.

Tables should be self-explanatory and should supplement, not duplicate, the text. Since the purpose of a table is to compare or classify related items, the data must be logically and clearly organized. The relationship and comparison are established by the correct choice of column heads (captions of vertical columns)and stubs (left entries in horizontal listings).

Each table should be typed double spaced, including all headings, on separate sheets of lettersize paper. Oversize paper should not be used. Instead, repeat heads and stubs on a second sheet for tables requiring extra width. Number tables consecutively. Each table must have a title.

Reprints

A reprint order form with a table covering cost will be sent with the galley proof to each contributor. Since the JOURNAL has no way to provide for reprints, they must be ordered by the author and purchased directly from the printer.



REFLECTIONS
SNOITCELFER

As a new year begins, it is time to reflect on the Foundation's accomplishments over the past year, and to ponder the future.

During 1974, the Foundation:

- Went from a "paper" organization to a "people" organization;
- Hired two full-time and one part-time employees;
- Negotiated, and received approval for, two funding contracts: one from the Kansas Regional Medical Program, and one from the Department of Health, Education and Welfare;
- Made over 20 presentations to Kansas physicians of the automated slide program entitled: "PSRO—What it means to the Kansas Medical Profession";
- Recruited members for the Foundation;
- Hired consultants to assist the Foundation in its PSRO activities;
- Met frequently with representatives of the fiscal intermediary, Kansas Hospital Association, welfare, HEW representatives, Bureau of Health Insurance, and others;
- Held several meetings of the KFMC Executive Committee and Board of Directors;
- Held two meetings of the KFMC Corporate Body;
- Held several meetings of the State Peer Review Committee for the purpose of quality review of claims submitted by various health insurance carriers;
- Continued to develop the organizational structure;
- Conducted other business in PSRO-Foundation work.

What we need to do in 1975:

- Assess the PSRO area as to current utilization review/quality assessment programs;
- Implement the plan to evaluate the state's short-stay hospitals;
- Implement the plan to collect relevant data and information;
- Implement the plan to conduct PSRO review (48-hour admissions certification, continued stay review, medical care evaluation studies) in short-stay hospitals;
- Implement the plan to create/adopt/modify institutional criteria and standards and to select norms to use in the process of review;
- Develop a plan to involve non-physician health care professionals in PSRO;
- Develop a training plan for PSRO administrative and review personnel;
- Develop a plan and the methods to integrate the results and findings of PSRO review into programs of continuing medical education;
- Develop a plan to implement PSRO in long-term care facilities.

We are now making some progress on many of the deliverables needed for 1975. A great deal of this progress, and of the progress noted for 1974, is due to the work of a small number of physicians. If 1975 is to be a successful year for the Foundation, you must get involved. We have a limited time to get PSRO on track, and we are barely out of the starting blocks. If you are asked to serve on a committee, please do so. If you wish to volunteer to serve on a committee, contact the office. We have several committees which can utilize your valuable expertise. The Foundation must achieve more than mediocrity in order to discharge our obligations to Quality Assurance for the Kansas Health Care System; please work with us to help us do so.

Your comments and criticisms are welcome. *J.E.A.*

Obituaries

GEORGE A. CHICKERING, M.D.

Dr. George A. Chickering, 88, of Hutchinson, died November 27, 1974, in Lincoln, Nebraska. He was born in Oquawka, Illinois, January 12, 1886.

Dr. Chickering was graduated from the University of Illinois School of Medicine, in 1912. He had practiced medicine in Hutchinson from 1916 until his retirement in 1971.

Survivors include a daughter.

CHARLES V. HAGGMAN, M.D.

Dr. Charles V. Haggman, of Concordia, died November 16, 1974, at the age of 98. He was born in Kackley, June 23, 1876.

Dr. Haggman was graduated from the Kansas City Medical College, in 1901. He had practiced medicine in the Scandia-Kackley area for nearly 70 years.

Surviving Dr. Haggman are a daughter and a son.

WARREN W. McDOUGAL, M.D.

Dr. Warren W. McDougal, 59, of Atwood, died November 5, 1974. He was born February 17, 1915, in Colby.

Dr. McDougal was graduated from the University of Kansas School of Medicine, in 1941.

NOBLE E. MELENCAMP, M.D.

Dr. Noble E. Melencamp, of Dodge City, died November 12, 1974, at the age of 86. He was born in Tampico, Indiana, June 10, 1888.

Dr. Melencamp was graduated from the St. Louis University School of Medicine, in 1913. He practiced medicine in Kansas since that time. Dr. Melencamp served as President of the Kansas Medical Society during 1938-39.

Survivors include his wife and a son.

HARRY SALOMON, M.D.

Dr. Harry Salomon, 77, of Topeka, died November 2, 1974, in Willemstad, Curacao, The Netherlands Antilles.

Dr. Salomon was graduated from the Friedrich Wilhelm University School of Medicine, Berlin, Germany, in 1922.

Surviving Dr. Salomon is his wife.



Open Letter to the Doctors of Kansas

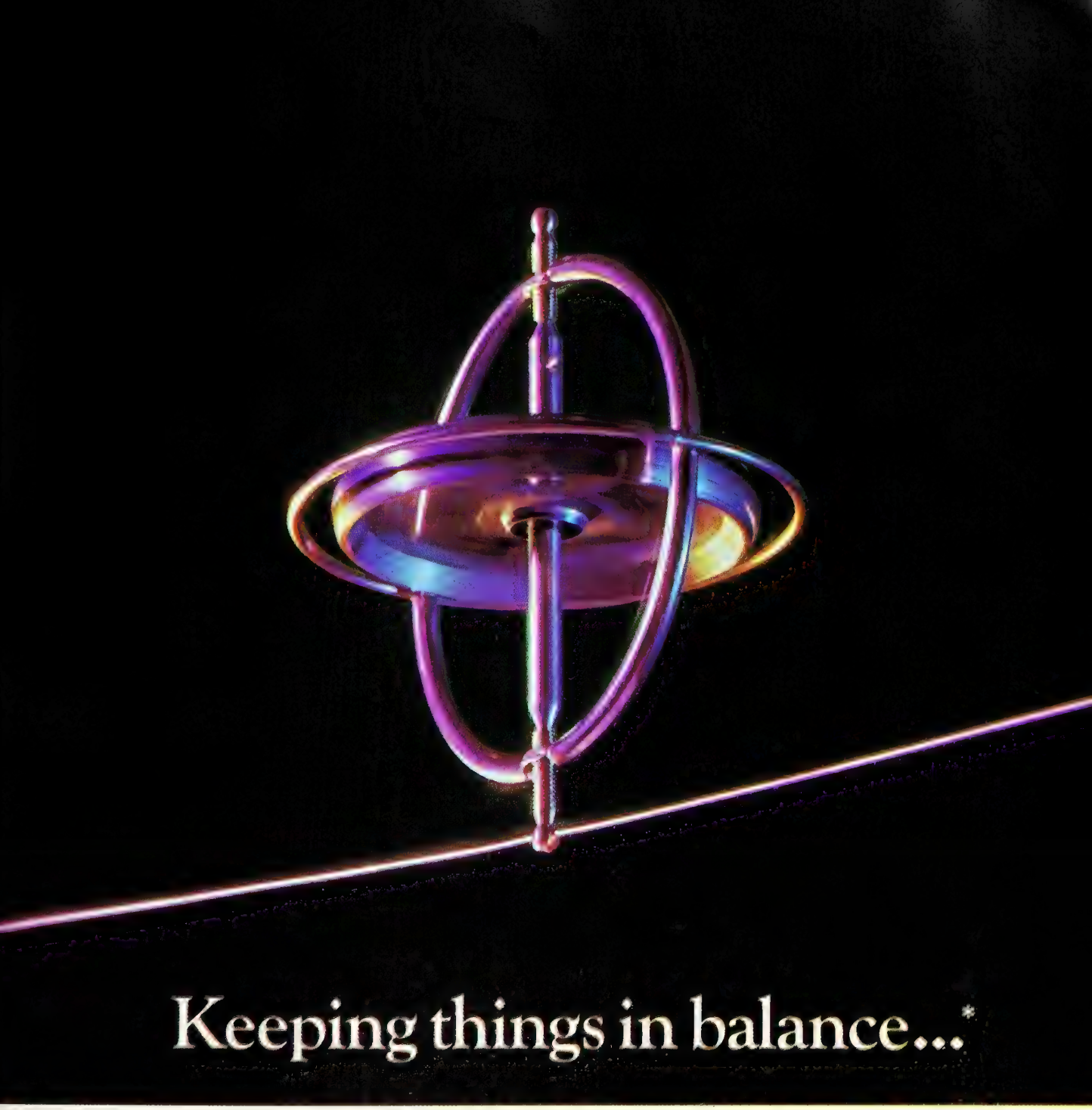
Since January is named for the Roman God Janus, who looked forward and backward, it is significant that at this time in our 50th anniversary year we review past accomplishments and set future goals.

In looking through many records and memory books of the Auxiliary, preparing for a special edition of our JOURNAL, I was interested to see the similarity of problems and efforts both in medicine as a profession and in the membership of the Auxiliary. Differences lie in the intensity of the issues, the number of people involved and, of course, in the media coverage. These differences call for more of us to become more intensely involved.

As in the past, the most obvious problem facing our nation, as well as our Auxiliary and Society, is apathy. We can't ignore it and shouldn't tolerate it. In our Auxiliary program, especially our "work-funshops" this fall, we recognized this obstacle. Our goal was to overcome apathy with enthusiasm and necessary, workable programs. From what I hear, our travel team of state chairmen transmitted the enthusiasm and information well. It was also gratifying to see the same things—attitudes and information—going back to the grassroots, our county auxiliaries, through the kinds of members and officers who represented these component organizations and participated in the programs. With this kind of members and officers, we hope to bury apathy. We want to convince the Kansas doctors' wives that all of them are needed to: (1) help tell medicine's story to the public; and (2) to lead the community in providing for its people's health needs. We must join hands across Kansas to pull closer together in our aims toward productive activity and friendliness among our own members.

Our "here and now" is a period of many and rapid changes. No change in organizations or individuals occurs without mistakes, since changes take place only when risks are accepted. We are proud to be the Auxiliary to the Kansas Medical Society, and will support and promote it with respect and integrity. We also plan to accept a few risks. We look forward enthusiastically to the challenges of 1975.

Dot Meyer
President,
Woman's Auxiliary to the
Kansas Medical Society



Antivert®/25 Tablets
(25 mg. meclizine HCl)

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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Also featured are a number of special interest programs: a two-day session on the Medical Aspects of Sports, a series of special courses on clinical pathology, and a joint program by the American Veterinary Medical Association and the AMA on diseases transmitted to man by household pets. Physicians' wives and families will be offered interesting programs co-sponsored by the AMA's Council on Scientific Assembly and the Woman's Auxiliary of the AMA.

For more information, write:
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Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

KEEP THE HYPERTENSIVE PATIENT ON THERAPY KEEP THERAPY SIMPLE WITH DYAZIDE®

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Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

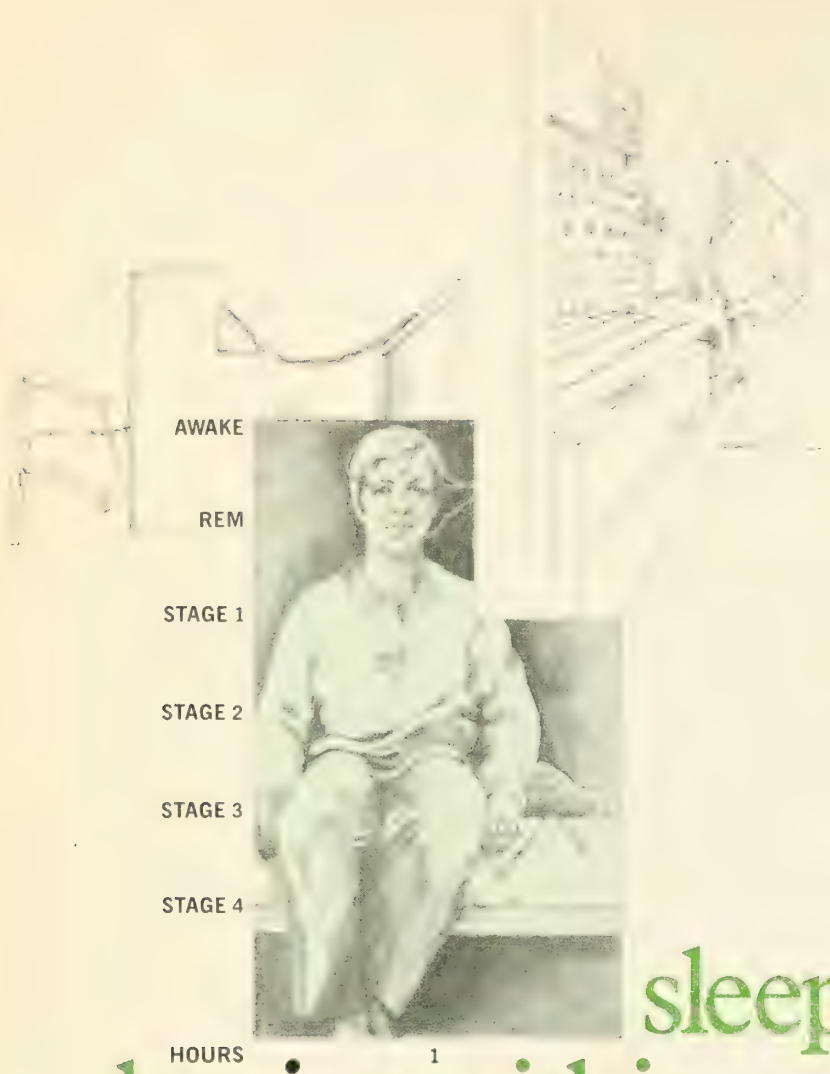
Just 'Dyazide' once daily or twice daily
No inconvenient potassium supplements
Nor special K^+ rich diets needed as a rule



Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

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sleep begins within 17 minutes, on average ...

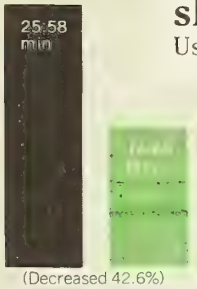
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Dalmane®
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proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]

Average Time Required to Fall Asleep (4 Studies, 16 Subjects[2-5])



(Decreased 42.6%)

Baseline (before **Dalmane**)

Dalmane (flurazepam HCl) 30 mg

confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
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- sustains sleep 7 to 8 hours, on average, without repeating dosage

REFERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry 23*:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
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5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

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Lomotil has few side effects, and those that do occur are generally mild.

Lomotil®
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride ..... 2.5 mg.
(Warning: May be habit forming)
atropine sulfate ..... 0.025 mg.

Usually stops diarrhea promptly.

IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid,* 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

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Book REVIEWS

AWAKENINGS, by Oliver Sacks. Doubleday & Co., Inc., New York. 1974. 249 pages. $7.95.

This author presents, in biographical form, 20 case histories of severe postencephalitic parkinsonism, in an attempt to describe an illness and its "cure"—parkinsonism and L-Dopa. *Awakenings* portrays in vivid detail the varied responses manifested by the patient before and during treatment with L-Dopa. The title implies an "awakening" of the victim when treated with L-Dopa —a drug which releases the patient from the unique "imprisonment" of the illness. Weaving throughout the book is the unstated theme that L-Dopa, thought sometimes a helpful adjunct, is seldom a cure.

His style displays a richness of language and reflects a valuable insight into patient care, no matter what the disease. Various parkinsonian disease manifestations, seldom the same in two patients, are cataloged—manifestations not usually recognized, looked for, or perhaps even familiar to most primary care physicians. At the risk of redundancy, by repetitious biography after biography, the author clearly describes the widely varying features of the illness: tic, pulsion, oculogyric crisis, festination, bulimia, akathisia and akinesia, including aphrenia.

This book is worthwhile reading for any primary care physician. The author has not intended to publish a compendium of Parkinson's disease, but rather through clear description he provides a valuable perspective and insight into patient care and medicine in general. He succinctly sounds the alarm of a trend in medicine leaning toward a mechanical treatment of patients at the expense of a personal one.—*T.B.*

TREATMENT OF CARDIAC EMERGENCIES, by Emanuel Goldberger, M.D. and Myron W. Wheat, Jr., M.D. The C. V. Mosby Company, St. Louis. 1974. 355 pages illustrated. $14.50.

This book is an easy-to-read comprehensive reference manual including discussion of cardiac emergency syndromes, apparatus used for cardiac emergencies, and drugs used for cardiac emergencies. It can be highly recommended for its clarity and precise descriptions of the syndrome discussed. There is a cookbook approach to the diagnosis and treatment of syncope, cardiac arrest, cardiogenic shock, and cardiac arrhythmia which could be quite valuable to those dealing with cardiac diseases who do not have the benefit of a cardiologist immediately available.

The tachyarrhythmias and bradyarrhythmias are clearly categorized, and there is also included a comprehensive approach to the treatment of hypertensive emergencies. The apparatus used for cardiac pacing, defibrillation, and cardiac monitoring is adequately discussed and serves as a ready reference area.

Another strong point is the reference area in the book for drugs used for cardiac emergencies. This would appear to be a valuable manual to be kept in the surgical suites, in intensive coronary care units, and as a ready reference for those practicing in general practice, internal medicine, and the general medical field. Non-MD coronary care personnel could derive a great benefit from reading and later referring to this book in times of emergencies.

The book seems to be successfully written for the clinician in a variety of medical and allied medical fields. Adequate reference sources are also furnished for those desiring a greater depth of knowledge.—*M.U.S.*

SYNOPTIC FUNCTIONAL NEUROANATOMY, by Wendell J. S. Krieg, Ph.D. Brain Books, Evanston. 1973. 74 pages. $6.00.

This very small book attempts to compress a description of the central nervous system with continual correlation with function into approximately 60 pages. A remarkable mass of information is compressed into this small space, and the main emphasis of the book is a following of systems (somatic, sensory, cerebellar, etc.) from afferents up through central connections. Probably the most original and striking portion of the book are the serial transparencies in color, simulating slices through the brain and showing connections and fiber tracts. Although this is obviously not a complete neuroanatomy textbook, it is well worth its modest price.—*D.K.Z.*

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March 12, 13 and 14, 1975

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February 19, 1975—Drs. Dick and Maxwell

PITTSBURG—Mt. Carmel Hospital
March 19, 1975—Drs. Brackett and Ziegler

SALINA—Asbury Hospital
December 12, 1974—Drs. Brackett and Couch
February 20, 1975—Drs. Dick and Brackett

Sessions are scheduled as follows for each center:
Dodge City—2:00-5:00 p.m.
Pittsburg —1:00-4:00 p.m.
Salina —1:00-4:00 p.m.

University of Kansas Faculty:

IRENE BETTINGER, M.D., Assistant Professor of Neurology.

CHARLES E. BRACKETT, M.D., Professor of Surgery (Neurosurgery), and Chief of the Section of Neurosurgery.

JAMES R. COUCH, Jr., M.D., Assistant Professor of Neurology.

ARTHUR R. DICK, M.D., Associate Professor of Neurology.

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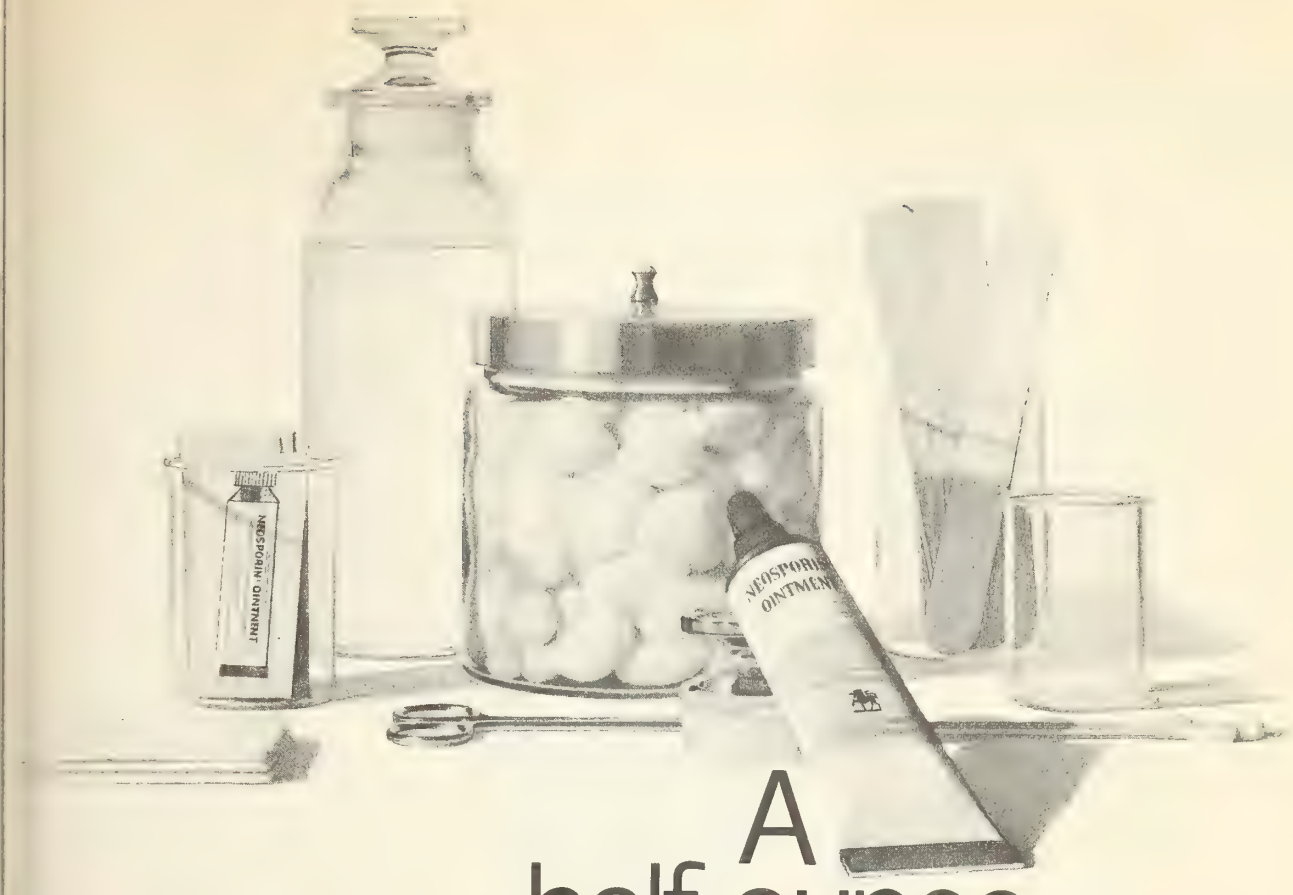
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CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum s perforated. This product is contraindicated in those individuals who have hown hypersensitivity to any of the components.

VARNING: Because of the potential hazard of nephrotoxicity and ototoxicity lue to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

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The Role of the Detail Man

Opinion & Dialogue

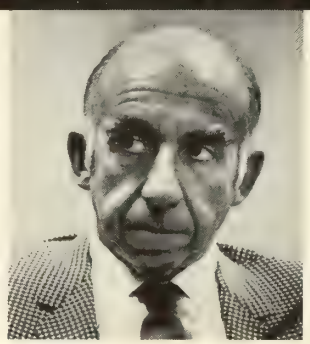


Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihoc on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

---

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

Month in Washington

The Government has issued its long-promised regulations to encourage purchase of lower priced drugs for the Medicare and Medicaid programs, and introduced a new wrinkle—a drug price information bulletin to be sent to all physicians.

Major impact of the regulations—if finally carried out—would be on physicians and pharmacies dealing with Medicaid patients and their outpatient drug benefits. The inpatient Medicare program involving hospital drug purchase would be less affected. However, the long-range implications of the HEW Department's plan in event of a National Health Insurance Plan are significant. HEW would clearly attempt to extend something like the Medicaid proposal for outpatient drugs to any national program that reimbursed such costs.

The new regulations are aimed at reimbursement for the lowest price drugs available where the drugs are chemically identical. The limit is termed "maximum allowable cost," or MAC. Physicians prescribing for Medicaid patients would have to prescribe the designated drug, or certify the necessity for prescribing a more expensive drug and give reasons.

HEW gave interested parties 60 days to comment on the proposals. After that, and assuming the final regulations are little changed, the only possibilities for blocking the drug pricing plan would be court action or legislation. A Food and Drug Administration spokesman told a news conference the HEW Department has "ample legislative authority" to promulgate such regulations. He estimated the plan would save federal and state governments at least $89 million a year when fully implemented in several years.

Pharmacists would be limited to their actual acquisition cost plus a dispensing fee. According to HEW, pharmacists in many state Medicaid programs are presently reimbursed on the basis of a published wholesale price "which may be more than 15 per cent higher than the actual cost of acquisition."

Under the proposal, HEW would concentrate on the 200 most widely-used drugs; some 12 to 20, if all goes according to plan, would be placed on the MAC list this summer.

The reimbursement plan would have the greatest impact on drugs that are not presently under patent protection and, therefore, come from several sources (about 40 of the top 200 fall in this category).

A Pharmaceutical Reimbursement Board would be set up at HEW to determine the maximum allowable costs. FDA would have to establish bio-equivalence to its satisfaction. An advisory committee would have a shot at the data and the recommendations before they were proposed formally.

The Pharmaceutical Manufacturers Association (PMA) said that though it recognizes the need to hold down federal spending, it believes many questions and problems are involved in the proposals. One is the professional role of the pharmacist and the physician in the prescribing process, according to the PMA. Another worry is the possible discouragement of innovation and improvement of drugs, PMA said.

The federal government is now providing 33 cents of every health care dollar spent in this country, according to a unique report made annually by the AMA-Washington office.

Actual dollar outlays in any given year may vary considerably from the appropriations provided by Congress, but the appropriations figure used by the AMA gives as accurate guideline as any other yardstick available on the nation's year-to-year health spending.

During the fiscal year that ended last July, the federal government disbursed more than $32.7 billion for health, up $2.6 billion from the previous year, plus more than $12 billion for disability programs. Total spending from all sources on health was estimated at about $100 billion.

The federal tab for the current fiscal year, ending in July 1975, is slated to register a sharp jump as new federal programs get going and increased overall health care costs are reflected.

The HEW Department leads the list of government health spenders with $23.7 billion appropriated last fiscal year for its many health activities, including Medicare and Medicaid. Next in line were Defense, $3,065,-274,500; and Veterans Administration, $3,016,853,000. Fourth and fifth slots are occupied by relatively recent federal activities—the Federal Employees Health Insurance program—$696.6 million—and the Environmental Protection Agency, $528.9 million. Agriculture comes next at $302.7 million for animal disease control, research, meat inspection, etc. (not counted are $7.8 billion for health related programs of food for school children, and rural housing, water and waste disposal activities).

A stern challenge to Congress to halt subsidies of the tobacco industry is voiced in a recent issue of the *Journal of the American Medical Association.* Weldon

J. Walker, M.D., of the Cardiopulmonary Center of White Memorial Medical Center, Los Angeles, and member of the *JAMA* editorial board, charges:

"Congress is using our tax money, in many ways, to subsidize increased death and disability among our citizens, as well as those of the rest of the world."

Dr. Walker pointed to the health hazards of smoking, established ten years ago by the Surgeon General's report on smoking and health, and reemphasized many times in the intervening years by additional hard data.

"When one stops smoking, the increased risk of death from coronary and peptic ulcer disease ceases immediately," he says. The slight dip in tobacco consumption that followed the Surgeon General's report has brought a drop in deaths from both these diseases.

"This dramatic breakthrough against coronary disease apparently has resulted chiefly from a modest reduction in tobacco consumption."

Dr. Walker said:

1. Congress provides price supports for tobacco that have been increased each year during the past decade. The price support per pound of tobacco has increased 34 per cent since 1964.

2. The percentage of cigarets produced free of federal tax has increased 7.5 per cent to 9 per cent during the past decade.

3. The federal tax on tobacco remained virtually unchanged from 1968 to 1973, despite a 38-per cent increase in its market value and a 57-per cent increase in exports.

4. On January 1, 1974, 14 per cent of the tobacco stocks in the United States and Puerto Rico were carried under federal loan support.

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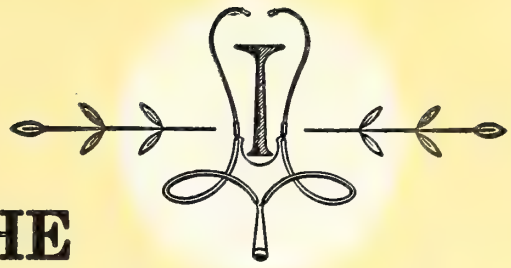
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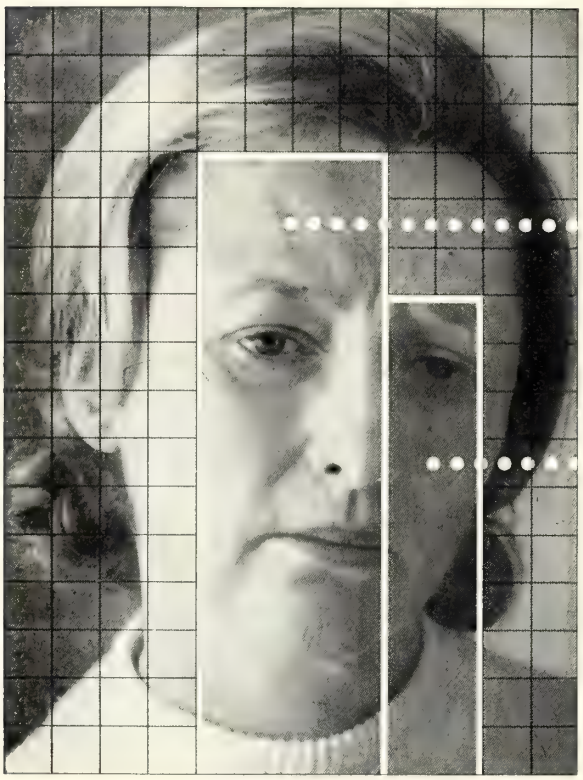


THE Journal Kansas Medical Society

FEBRUARY
1975

VOL. LXXVI
NO. II

Both often



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Volume LXXVI, Number 2—February, 1975

The JOURNAL of the KANSAS MEDICAL SOCIETY

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AMA House of Delegates

Summary of Actions Taken at the 28th Clinical Convention, Portland, Oregon, November 30-December 3, 1974

The following report was prepared and submitted to THE JOURNAL by George E. Burket, Jr., M.D., Overland Park, and Clair C. Conard, M.D., Dodge City, AMA Delegates from Kansas, who both attended the meeting in Portland, appeared before the reference committees, and acted upon all the business submitted to the House.

AMA Finances and Related Matters

A mandatory, special assessment of $60 for AMA members was approved by the House of Delegates at the 28th Clinical Convention in Portland. The assessment, effective January 1, 1975, for AMA members excluding students, interns and residents, is expected to improve immediate cash-flow problems and help build up depleted financial reserves.

Rejecting a $90 dues increase proposed by the Board of Trustees, delegates instead called for a special committee of the House to study the dues issue and report back at the 1975 Annual Meeting.

Meeting for a total of 16 hours and 40 minutes, one-third of it devoted to AMA finances and related issues, the House acted on 77 reports and 68 resolutions for a total of 145 items of business.

In assessing a mandatory, $60 special assessment effective January 1, the delegates acted to strengthen AMA finances. The House was reminded that the Association has operated at a deficit for four of the last five years, and that cash reserves have been seriously depleted during that time. In addition, AMA finances in 1974 were adversely affected by inflationary pressures.

After almost six hours of comment and deliberation on Tuesday afternoon and Wednesday morning, the delegates adopted the $60 special assessment as a stopgap measure. The question of a dues increase was referred to a special committee of the House to be appointed by the Speaker. The committee will make a comprehensive study of the AMA's financial priorities and capabilities, and report to the House at the 1975 Annual Meeting.

In related actions, the House strongly urged the Board of Trustees to restore in a "holding pattern" the structure of several councils and committees which were to have been eliminated, and to maintain present publication schedules for *JAMA,* all specialty journals, and *Prism.*

The House also approved advertising as a legitimate function in AMA publications, and urged that the present full and unrestricted advertising program in AMA publications continue pending further study and a report at the June meeting.

Professional Liability

During a discussion of malpractice problems, the House adopted a recommendation calling for the Board to give "priority attention" to providing legal counsel and advice to AMA members and state societies in the event their professional liability insurance is not renewed.

The House also emphasized the necessity for state associations to seek legislative remedies for malpractice problems, and directed that the AMA continue to cooperate with the Medical Liability Commission.

Meetings Format Changed

A separation of the fall business meetings of the House and the scientific meetings will be permitted beginning in 1977.

Under bylaws changes adopted by the House in Portland, the House will hold its fall meeting separately in cities recommended by the Board and selected by the House, and the scientific session will hold regional meetings at other times during the year as deemed necessary by the Board and at cities selected by the Board.

The new format was devised to allow regional scientific programming. The scientific assemblies will continue to be held in conjunction with annual meetings, however.

In other actions on internal matters, the House called for a definitive report at the 1975 annual meeting of AMA activities and programs related to PSRO.

Physicians, Hospitals, and Medical Schools

Due Process

The House adopted several recommendations which reaffirm the rights of all physicians, including housestaff and medical students, to due process. In related actions, the House adopted as AMA policy the proposition that a student's academic records should be open

(Continued on page 39)

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References: 1. Reuter, S.H., and Montgomery, W.W.: Arch. Otolaryng. *80*:214-217 (Aug.) 1964. **2.** Osol, A., et al., ed.: The United States Dispensatory and Physicians' Pharmacology, ed. 26, Philadelphia, J.B. Lippincott Co., 1967, p. 171. **3.** Schwartz, A.D., and Pearson, H.A.: J. Pediat. *78*:558-560 (March) 1971.

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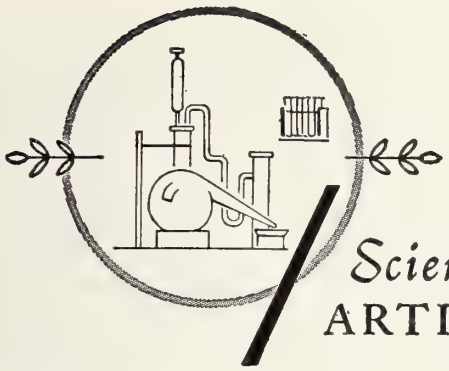
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Peritoneal Dialysis

Treatment of Chronic Renal Failure

HUGO WEBER, M.D., ***Wichita***

PERITONEAL DIALYSIS has found acceptance in the treatment of acute renal failure; however, it is not widely recognized that intermittent peritoneal dialysis can be utilized in the treatment of chronic renal failure. Peritoneal dialysis has successfully been employed in patients with chronic renal failure who suffer potentially reversible deterioration secondary to dehydration, infection, malignant hypertension, or congestive heart failure. With correction of the precipitating factor, these patients may revert back to their previous level of renal function and can be managed without long-term dialysis.

Many times, the potential reversibility of primary renal disease is not immediately apparent and peritoneal dialysis is used to correct uremia while diagnostic work-up is undertaken. Peritoneal dialysis is commonly performed on an intermittent basis to allow maturation time for surgically created arteriovenous fistulae placed in patients in preparation for long-term hemodialysis. Peritoneal dialysis permits slow correction of uremia and allows easy transition to hemodialysis without symptoms of disequilibrium with rapid flux in body fluids. Patients then enter onto chronic hemodialysis without fear of uncomfortable symptoms, and psychological adjustment to dialysis is easier.

Although regular hemodialysis is the treatment of choice for terminal renal failure, there are instances where chronic intermittent peritoneal dialysis is clearly an acceptable alternate mode of therapy.

Address reprint requests to: Hugo Weber, M.D., Hemodialysis Unit, St. Francis Hospital, Wichita 67208.

This report will present the history of a patient on chronic intermittent home peritoneal dialysis, and a discussion of problems encountered with this therapy.

Chronic intermittent peritoneal dialysis is an alternate means of managing patients with end-stage renal disease who are unable to tolerate hemodialysis. The case report of a patient currently maintained on intermittent home peritoneal dialysis is presented together with a discussion of peritoneal dialysis and problems encountered with this form of therapy.

Case Report

The patient was a 73-year-old white female, initially hospitalized for acute bronchitis in January 1973. Upon admission, BUN was 10 mg/100 ml; creatinine, 0.8 mg/100 ml; hematocrit, 38%; hemoglobin, 12 gm/100 ml. The patient was treated with a broad spectrum of antibiotics. After discharge, she complained of weakness and had frequent bouts of nausea and vomiting. She was readmitted to the hospital on March 27, 1973, with a three-week history of hematuria which had failed to respond to numerous antibiotics. Upon this admission, BUN was 30 mg/100 ml; creatinine, 2.3 mg/100 ml; hematocrit, 29%; hemoglobin, 10 gm/100 ml. Urinalysis showed 1+ protein and no mention was made of red cell casts. Intravenous and retrograde

pyelograms were normal. Urine cultures were negative for growth. The patient was discharged but continued to feel weak and tired, and on April 23, developed gastrointestinal bleeding. Gastroscopy demonstrated numerous punctate bleeding stomach ulcers. Hematocrit fell to 21%. Transfusions were complicated by febrile reactions, but urine output averaged 2,000 ml/day. On May 9, serum creatinine was 11.6 mg/100 ml, and BUN was 155 mg/100 ml. The patient developed congestive heart failure and peritoneal dialysis was performed on May 17. Subsequent peritoneal dialysis was required on June 1 and June 16. On June 19, the patient was transferred for initiation of chronic hemodialysis.

She presented as a chronically ill, elderly female in respiratory distress. Blood pressure was 194/80. A prominent S_4 was present.

Laboratory studies demonstrated a creatinine clearance of less than 10 ml/min, 450 mg protein in a 200 ml urine sample, absent antinuclear antibodies; serum complement on two determinations was 94 mg/100 ml and 68 mg/100 ml (80-140 mg/100 ml) ; serum fibrin split products were absent and coagulation studies were normal. Renal tomograms demonstrated two kidneys which were small in length and width. Renal biopsy was not attempted.

The patient was treated with digitalis and large doses of furosemide to control symptoms of severe congestive heart failure; however, response was poor to this program and she had persistent oliguria. On June 25, a Scribner arteriovenous shunt was inserted in the wrist, and the patient was placed on intermittent hemodialysis. Hemodialysis was tolerated poorly, and recurrent episodes of nausea, vomiting, and hypotension occurred with attempts at ultrafiltration. Her symptoms of congestive heart failure worsened during inter-dialysis periods despite continued use of diuretics and digitalis. The Scribner shunt was removed and chronic intermittent peritoneal dialysis was begun on August 10. At the time of insertion of the peritoneal catheter, fecal material was noted on return drainage, and cultures of catheter drainage and blood subsequently grew out E. coli and enterobacteria. The catheter was replaced and large doses of parenteral antibiotics were given during the next 72 hours of dialysis, and for three weeks thereafter on an outpatient basis. Surgical exploration was not required. The patient was also discharged on digitalis and high doses of furosemide. She remained bedridden at home with weakness, nausea, vomiting, and dyspnea. Peritoneal dialysis was repeated on September 12, to control symptoms of uremia with acute pericarditis. Pre-dialysis BUN was 110 mg/100 ml; creatinine, 11 mg/100 ml; albumin, 2.4 gm/100 ml; hemoglobin, 7.1 gm/100 ml.

In an attempt to provide more frequent peritoneal dialysis without the necessity of repeated punctures of the abdominal wall, an indwelling Tenckhoff peritoneal dialysis catheter was inserted on October 4.

Peritoneal dialysis was initially performed for twelve hours, twice weekly, and during the hospital dialysis period the patient's relative was trained to conduct the peritoneal dialysis by the ward nursing staff. At the end of two weeks of training, the patient was discharged entirely to home dialysis, where the procedure was performed entirely by the patient's relative.

On the program of 24 hours per week peritoneal dialysis, the BUN pre-dialysis averages were 60 mg/100 ml, and creatinine 7 mg/100 ml. Hemoglobin was 8.3 gm/100 ml, and hematocrit 25%. Serum albumin was maintained at 3.5 to 4.0 gm/100 ml, and supplemental albumin was given on a monthly basis as needed. There has been improvement in respiration as fluid was consistently removed during dialysis. The patient has maintained a urine output of 300 ml per day, and has been eating a diet modestly restricted in sodium and potassium. Admissions to the hospital have been necessary only during times when more frequent dialysis is required, such as one episode of acute pericarditis, or when operator fatigue and illness made home dialysis impossible. Peritoneal cultures have not demonstrated infection since home dialysis was initiated. The patient currently is being dialyzed for eight hours, three times a week.

Discussion

Experimental studies with peritoneal lavage were first performed in 1877 by Wegner. While studying the ability of peritoneal lavage to alter body temperature in rabbits, he found that large amounts of fluid could be removed from the animals by using concentrated sugar solutions. In 1923, Ganter reported the first case of peritoneal dialysis in a patient with a pelvic tumor and ureteral obstruction. After this report, peritoneal dialysis was increasingly employed in patients with acute renal failure. Rhoads, in 1938, reported the first use of chronic intermittent peritoneal dialysis in the treatment of terminal renal failure; however, peritoneal dialysis did not become a popular form of chronic therapy for renal disease for several reasons. Foremost among these was the high incidence of recurrent peritonitis with formation of dense adhesions, which makes adequate dialysis technically impossible. This problem has largely been solved by the introduction of closed drainage techniques with completely closed, sterile,

fluid delivery systems, and the development of a bacteriologically safe peritoneal access device—the Tenckhoff catheter[1]—which eliminates the need for repeated puncture of the peritoneum.

The Tenckhoff catheter is a silastic tube with spaced perforations of 0.5 mm in diameter at the distal 15 cm of the tube. Dacron felt cuffs are bonded to the silastic catheter in two places, thus dividing the catheter into three parts. The intraabdominal portion of the catheter is 20 cm long and is surgically placed in the peritoneal cavity, utilizing a special trocar *(Figure 1)*. The catheter is placed so that the distal dacron cuff is located just outside the peritoneum. An arcuate subcutaneous tunnel is constructed and the middle portion of the catheter gently curved to bring the proximal cuff to a point immediately beneath the epidermis of the abdominal wall *(Figure 2)*. The third portion of the catheter is capped and taped to the abdominal wall. Sutures should not be tied around the catheter at its exit point as they invariably lead to infection. Tissue ingrowth into the dacron cuffs occurs in about two weeks and provides protection against infection entering through the catheter sinus tract.

The most common route of infection leading to peritonitis is not via the sinus tract but rather through the lumen of the dialyzing catheter. There are four ways to avoid infection from this route: (1) The peritoneal catheter should be inserted under strict asepsis, preferably in an operating theater with skin preparation as rigid as that employed for laparotomy. (2) A closed system of dialysis should be employed, using sterile drainage bags and commercially prepared sterile solutions. Dialysate solutions should not be left standing for long periods of time after opening for installation of additives. They should be warmed, additives thoroughly mixed, and then infused immediately. (3) Peritoneal dialysis is best performed following a rigid schedule of hourly exchanges for as short a period of time as possible, consistent with correction of uremic abnormalities. The longer dialysis treatments are continued, the greater the risk of infection. (4) The most significant factor in preventing infection is strict attention to sterile precautions by the operator during the connecting and disconnecting procedures. Rigid attention to details will be rewarded with a low incidence of infection. Sterile disposable start and stop trays should be used for each dialysis.

Operator training is of paramount importance, and continuous repetition of details by the home dialysis training staff allows the operator to gain confidence in connecting and disconnecting the patient to dialysis. Before discharging the patient to home, the operator conducts several peritoneal dialyses in the hospital, un-

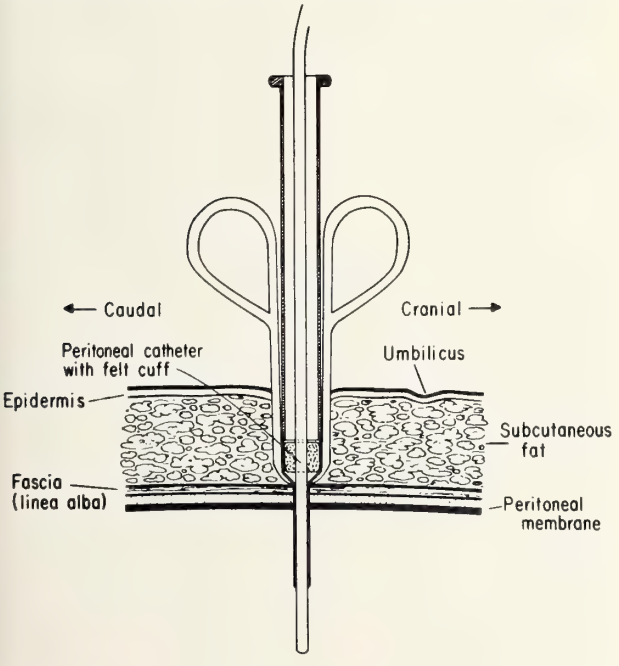


Figure 1. Placement of the Tenckhoff catheter.

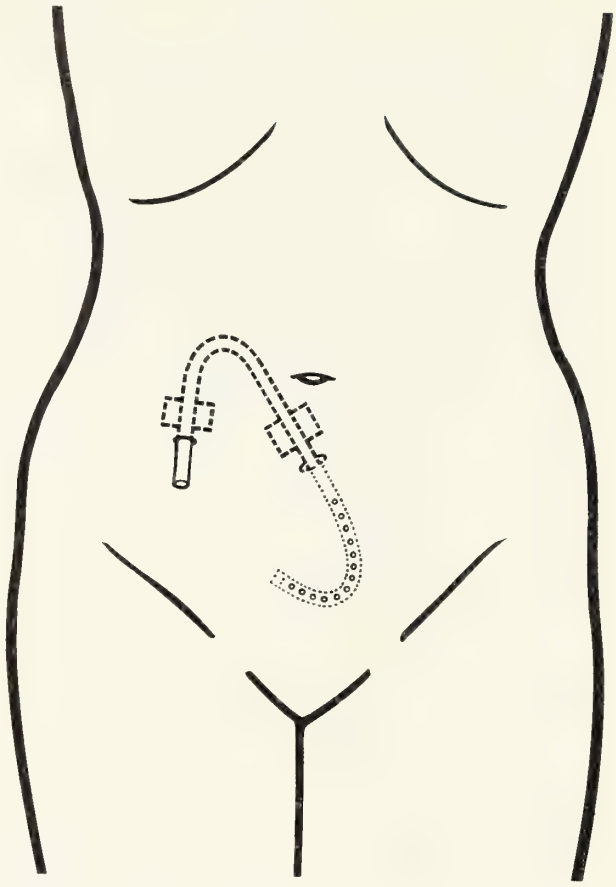


Figure 2. The Tenckhoff catheter after placement.

der the supervision of the training staff. Only when they are confident of the ability of the operator to perform a sterile connect and disconnect procedure is the patient allowed to begin home dialysis.

One of the problems limiting effective home peritoneal dialysis has been the time burden placed on the operator during dialysis periods. In the patient discussed, who was initially dialyzed a minimal twelve hours, twice a week, this was not a significant problem except at times when dialysis needed to be increased in frequency, for example, during a bout of pericarditis. This resulted in operator fatigue and necessitated admission to the hospital for more intense dialysis.

The development of peritoneal dialysate proportioning and delivery systems offers a solution to this problem. These systems proportionate purified water with dialysate concentrate and automatically deliver heated dialysate cyclically to the patient. These systems, together with the Tenckhoff catheter, help eliminate the technical problems of chronic dialysis and allow for maintenance home peritoneal dialysis at a relatively low cost.

The dialyzer in peritoneal dialysis is the peritoneum, a semipermeable membrane with a surface area estimated to be 22,000 sq cm. The dialysate is a commercially prepared sterile solution of electrolytes whose final osmolality is determined by the amount of glucose which is added. Potassium is usually not added to the commercial dialysate so that maximum blood-dialysate gradients can be established by the operator.

Simple principles of diffusion govern the kinetics of peritoneal dialysis, and knowledge of these is essential in order to conduct a safe efficient dialysis. Basically, two gradients between extracellular fluid and dialysate are created during peritoneal dialysis: an osmotic gradient and a concentration gradient.

Glucose is used to establish an osmotic gradient by adding increasing amounts of glucose to the dialysate. The commonly used commercial peritoneal dialysis solutions contain 15 gm of glucose per liter (1.5% solution) and 42.5 gm of glucose per liter (4.25% solution). Since glucose is slow to diffuse across the peritoneal membrane, the intraperitoneal equilibrium time of 30 minutes employed in hourly exchange dialysis creates an osmotic gradient between extracellular fluid and dialysate. The slowly diffusable glucose molecule in higher concentration in the dialysate creates an osmotic gradient which allows removal of excess fluid from the patient.

To effect maximum removal of fluid, solutions of increasing tonicity can be employed; however, there is a danger of hyperglycemia, especially in diabetics, and precipitation of hyperosmolar coma. To avoid these complications, many operators prefer to alternate solutions of different glucose concentration during the dialysis period. For example, 1.5% dialysate (372 mOsm/L) can be alternated with 4.25% dialysate (525 mOsm/L) on every second or third exchange. This will allow effective fluid removal without the danger of hyperglycemia. Frequent checks of serum glucose and serum osmolality are desirable, especially in brittle diabetics undergoing dialysis. Recording the blood pressure hourly in supine and sitting positions is helpful. A postural fall in blood pressure indicates that the patient may be dehydrated, and appropriate correction can be made. Individuals dehydrated at the initiation of dialysis should be encouraged to take fluids orally and may require supplemental intravenous fluids. Daily weighing of the patient allows the development of a suitable dialysis program, so that maximum amounts of fluid can be removed during dialysis without producing symptoms of volume depletion in the inter-dialysis period. When the patient reaches dry weight, the use of medications such as digitalis and diuretics may no longer be necessary to control symptoms of congestive heart failure.

The second gradient which is established in peritoneal dialysis is a concentration gradient. The concentration gradient between extracellular fluid and dialysate determines the rapidity of diffusion of electrolytes and toxins in uremia. In chronic renal failure, the degree of azotemia (BUN) usually reflects the severity of the uremic syndrome, and lowering of the BUN by dialysis results in clinical improvement. Actually, dialysis removes many unknown uremic toxins, but the BUN level is a valuable guide to effective dialysis. It takes approximately two hours to achieve complete equilibration between two liters of peritoneal dialysate and the extracellular fluid with respect to urea concentration. This length of dwell time would almost certainly lead to peritonitis. After 30 minutes of equilibration, the dialysate urea concentration is 61 mg/100 ml of the blood urea concentration, and a further increment of only 18 mg/100 ml occurs during the next 30 minutes.[2] It is for this reason that 30 minutes has been accepted as an adequate equilibration time. Warming the dialysate to body temperature prior to infusion will increase dialysis efficiency, since urea clearance is 35 per cent greater at 37C than at 20C.[3]

Clearance rates of substances removed from the extracellular fluid by peritoneal dialysis can be calculated according to the Van Slyke equation: $C = \frac{UV}{P}$ where C = peritoneal clearance, U = concentration of the substance in dialysate at the end of equilibrium,

V = dialyzed volume in ml/min, and P = concentration of the substance in plasma. Using exchange volumes of two liters/hour, the clearance of urea averages 21 ml/min; potassium, 17 ml/min; creatinine, 13 ml/min. Peritoneal dialysis is only 25 per cent as efficient as hemodialysis over the same length of time; however, correction of uremia occurs without symptoms of disequilibrium seen with hemodialysis.[2, 4]

Complications associated with peritoneal dialysis include trauma to viscera during insertion of the catheter, infection, pulmonary insufficiency, and biochemical abnormalities consequent to dialysis.[5, 6]

Trauma to viscera can be avoided by pre-filling the abdomen with two liters of dialysate through a 14-gauge intravenous catheter before inserting the larger peritoneal catheter. Previous abdominal surgery and adhesions increase the risk of traumatic complications, and if an old midline surgical scar is present, it is best to insert the peritoneal catheter in the lower quadrant, away from the midline.

The major complication—limiting successful chronic peritoneal dialysis—is infection. Frequent cultures of dialysate should be obtained, and any change in color or odor of the dialysate should be immediately reported by the home operator. Peritonitis is treated with parenteral antibiotics, although some authorities recommend concomitant intraperitoneal administration of antibiotics. Infection may necessitate removal of the catheter to prevent abscess formation and adhesions.

Pulmonary complications associated with peritoneal dialysis include atelectasis and pneumonia. The upward displacement of the diaphragm produced by dialysis leads to these complications. They can be avoided to a large degree by simple measures, such as using frequent small (1 liter) exchanges, having the patient sit up during dialysis, providing chest physiotherapy, and avoiding narcotics and other respiratory depressants.[7]

Pleural effusions are common during chronic dialysis and arise from the transdiaphragmatic passage of dialysate. No therapy is needed unless the fluid interferes significantly with respiration. The effusion of glucose and water provides an ideal solution for bacterial growth, and a chest x-ray should be obtained when a patient on peritoneal dialysis develops fever. The patient with congestive heart failure and reduced lung compliance may experience considerable dyspnea with infusion of two liters of dialysate into the abdomen. Reducing the volume of dialysate until negative fluid balance is achieved will improve respiration. There are recent studies which suggest that 30-minute, one-liter exchanges are as efficient as the standard two-liter exchanges.[8]

Hypovolemia, hypernatremia, hyperglycemia, and hyperosmolar coma are complications seen with overly vigorous removal of fluid during dialysis. It has been recommended that 0.5% dextrose dialysate be made commercially available for use in situations where there is no need for removal of excess fluid, such as in chronic peritoneal dialysis.[9]

Potassium is omitted from commercial solutions and is added by the operator so as to achieve a normal serum potassium. If the patient is taking digitalis, it is important to maintain a high normal serum potassium. This assumes importance also, because patients on chronic dialysis tend to develop metabolic alkalosis. One reason for this is the high lactate content of commercial dialysis solutions. Since these solutions are designed primarily for use in acute renal failure, the lactate concentration is high (45 mEq/L) to allow for correction of the commonly associated metabolic acidosis. Patients on chronic peritoneal dialysis, however, do not usually develop metabolic acidosis between treatments, and as a result the high lactate content of the dialysate produces metabolic alkalosis. The opposite problem has also been observed, namely lactic acidosis, during dialysis in patients with severe liver disease who are unable to metabolize lactaten. For use in chronic peritoneal dialysis, a solution has been recommended which would contain sodium 132 mEq/L, calcium 3.5 mEq/L, magnesium 1.5 mEq/L, chloride 102 mEq/L, lactate or acetate 35 mEq/L, and dextrose 1.5% and 4.25%.[10]

Uniform commercial solutions with this composition would eliminate complications such as hypernatremia and alkalosis. With continuing interest in chronic peritoneal dialysis, it is anticipated that solutions more appropriate to chronic dialysis will be available.

There is a danger of metastatic calcification with long-term peritoneal dialysis.[11] The calcium concentration in commercial solutions is 3.5 mEq/L, which is higher than the ionized serum calcium concentration and, as a result, calcium is dialyzed into the patient. Since most patients with chronic renal disease are hypocalcemic, this is desirable to help correct renal osteodystrophy. If the serum phosphorus is high, however, a high calcium phosphorus ion product may occur and result in metastatic calcification. Phosphorus is poorly dialyzed, and aluminum hydroxide gels may be required to bind phosphorus in the gut and lower serum phosphorus. The serum level should be kept between 3 and 6 mg/100 ml.

Significant amounts of plasma protein may be lost during chronic peritoneal dialysis. Albumin is lost to a

greater extent than globulins, and may average 50 gm per dialysis.[12] A protein "depletion syndrome" has been described with weakness, anorexia, clonic seizures, and coma.[13] Patients on chronic peritoneal dialysis should receive diets with high biologic value protein and if protein loss becomes significant, infusions of albumin may be necessary.

Summary

Chronic intermittent peritoneal dialysis is effective in the treatment of patients with end-stage renal failure who are not candidates for hemodialysis. The technique of dialysis is relatively simple in theory and practice, and requires no extensive training period for home operators. The development of bacteriologically safe access devices and automatic cycling systems has permitted home peritoneal dialysis with a minimum of complications and time expenditure. Success with this form of therapy depends on strict attention to details of technique and knowledge of potential complications.

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Sudden Infant Death Syndrome

An Approach for Kansas Physicians

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FEW HUMAN TRAGEDIES can be so emotionally devastating as the sudden, unexpected loss of a baby put to bed supposedly well and found dead in the crib hours later. In the United States, it is estimated that between 8,000 and 10,000 infants die from sudden infant death syndrome (SIDS) each year. In the state of Kansas, 242 post-neonatal deaths (death between 28 days and 1 year of life) were recorded during the period from January 1, 1970 to December 31, 1972, an incidence of slightly less than 4 per 1,000 life births.[1] Based upon other investigations reporting incidences of SIDS of 2 to 3 per 1,000 live births, it may be estimated that between 100 and 150 of these deaths could be attributed to the SIDS during that period.[2] Although there is general acceptance that SIDS exists as a clinicopathological entity, numerous uncertainties remain concerning the cause, epidemiology, and pathophysiology of this entity. But these uncertainties offer little solace for the parents for whom this unexpected loss of life can provoke immense guilt feelings as well as feelings of grief, despair, and incompetence. Problems related to these feelings which follow virtually every case of SIDS are predictable, definable and, most important, they are manageable, provided physicians who encounter the problems are aware of their occurrence as well as the resources required to effect optimal management.

Definitions and Terminology

A working definition for SIDS derived during the 1969 conference on sudden infant death was as follows:

The sudden death of any infant or young child, which is unexpected by history, and in which a thorough post-mortem examination fails to demonstrate an adequate cause of death.[3]

Thus, the diagnosis of the sudden infant death syndrome remains entirely exclusional, although several positive findings in the history and from the autopsy nearly always accompany death from the sudden infant death syndrome. The lack of uniform terminology, the non-existence of a certifiable code for the syndrome (there is no code in the International Classification of Diseases), and the lack of agreement as to the lethality of demonstrated lesions confound the problem in accurate diagnosis and the resultant epidemiological observations. The occurrence of the SIDS with other identifiable disease processes, and often arbitrary stipulated criteria for inclusion or exclusion from the sudden infant death syndrome classification, has further made precise identification of death due to this syndrome even more difficult.

While there is general acceptance that the Sudden Infant Death Syndrome exists as a clinicopathological entity, numerous uncertainties remain concerning the cause, epidemiology, and pathophysiology of this entity.

History

Historically, infant death was recorded as resulting from overlaying by the mother or nurse (I Kings 3:19-20). Garrison[4] cites additional mention of overlaying as portrayed in the literature and theater of later times. In 1842, Lee[5] published a review of the ". . . morbid affections, and the diseases that arise . . ." from thymic enlargement, and postulated an enlarged thymus as a cause for sudden infant death. Doubt, however, existed that infant death was not the result of neglect, accident, or willful infanticide as illustrated in the report of Templeman,[6] reporting in 1896 from his experience as a police surgeon in Dundee, Scotland, where 258 cases of infant "suffocation" were reported. He postulated overlaying by the mother's breast, bed clothes,

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and turning in bed by parents as the mechanism of suffocation. Autopsy findings dramatically were similar to those of today, namely:

> Frothy mucus, often tinged with blood, is generally seen about the mouth and nostrils. The hands are sometimes tightly clenched. In about half the cases examined small punctiform haemorrhages were observed beneath the pleura and pericardium. The larynx, trachea, and bronchi were as a rule, congested, and contained some frothy, often blood-stained mucus.

Templeman stated the principal causes producing this great mortality from overlaying were "ignorance and carelessness of mothers; drunkenness; overcrowding and, according to some observers, illegitimacy and insurance of infants."

The reproach to parents by Templeman, no doubt, led to similar accusations by other physicians and the legal profession that has consistently taken a toll in parental feelings during the 20th century. Of great interest, however, were the observations in the 19th century that remain consistent with observations today. Templeman noted a greater occurrence from October to March, the greater incidence from one to six months of life, and postmortem findings consistent with those currently recognized as being indicative of SIDS. Not until the 1950s and the work of Werne and Garrow[7] and Adelson[8] did a careful scientific approach to sudden death in infancy take place.

Epidemiology

Numerous epidemiological studies from several countries with demographically dissimilar populations have consistently yielded compatible findings. Studies by Peterson[9] in Seattle and San Diego, Froggatt,[10] *et al.* in Northern Ireland, and Strimer, Adelson and Oseasohn,[11] in Cleveland, all indicate similar incidence figures in the range of two to three per 1,000 live births. While several factors have been demonstrated to correlate with the incidence of SIDS, less certainty has been expressed regarding specific risk factors. This differentiation deserves considerable scrutiny in light of the comments of Yerushalmy and Palmer:[12] "The suspected characteristic can be said to be specifically related to the disease . . . when . . . similar relationships do not exist with a variety of characteristics and with many disease entities when such relationships are not predictable on physiologic, pathologic, experimental or epidemiologic grounds." One factor, however, appears consistently found in sudden infant death syndrome cases. This factor is the unique association with sleep.

Occurrence During Sleep

In 119 autopsied infants with the sudden infant death syndrome, not one was observed to die while awake; all were discovered lifeless during or at the end of a sleeping period.[3] A later report confirms these initial findings in 170 additional cases.[2] Studies in Czechoslovakia[3] found 88 per cent of 502 cases dead without benefit of observation. The remaining infants died in the arms of the mother or en route to emergency care. Valdes-Dapena,[13] in a critical analysis, indicated that the vast majority of infants were found dead at night during the sleeping period. In a Seattle study,[3] the time of the discovery of the dead infant further corroborated this association with sleep. Seventy-four per cent of infants were found between 6 AM and noon, most of these during the hours of 7-9 AM. Fourteen per cent were found dead between noon and 6 PM, at the conclusion of the afternoon nap. Other studies have been reported of babies succumbing while sleeping in infant car seats. All of these findings point unmistakingly to the fact that infant deaths occur during sleep, or at least at times when infants are usually asleep.

Gestational Age, Birth Weight, and Chronologic Age

Gestational age and birth weight appear to greatly alter the likelihood for sudden infant death. *Table 1* shows data from Beckwith *et al.*[3] report of their 1965-1968 survey of infants diagnosed at autopsy as having SIDS, indicating a greatly increased risk of SIDS in premature babies born prior to 35 weeks gestation. Peterson[14] found that low birth weight was also associated with a striking increase risk of SIDS. A rate of 22.2 per 1,000 live births was found in those infants of 1,000-1,500 gm, and 13.0 per 1,000 live births for those 1,501-2,000 gm.

Also of interest is the chronological age at which infants die from the sudden infant death syndrome. Studies in King County, Washington, Cleveland, Belfast, and rural counties in Northern Ireland, Copenhagen,[15] and in England and Wales[16] indicate a greater incidence in the first six months of life, peaking from two to four months with a gradual decrease throughout the remainder of the first year of life. The chronologic age of occurrence of SIDS appears to be a factor, independent of gestational age; infants born following 34 weeks gestation succumb most often between 2 and 4 months of age, as do full-term infants.

Seasonal Variation

Seasonal changes in the temperate climates appear to influence the occurrence of sudden infant death syndrome with a greater incidence during the late fall, winter and early spring, and a decline in cases during the warmer months. Interestingly, characteristic seasonal variation has occurred in highly dissimilar climates—Cleveland and San Diego.[14]

TABLE I

RATE OF SIDS VERSUS GESTATIONAL AGE IN WEEKS

Gestational Age in Weeks	*SIDS Rate per 1,000 Live Births**
Under 34	7.3
34	27.5
35	3.2
36	2.2
37	2.3
38	2.5
39	1.0
40+	1.9

* The rate for all infants is approximately 2.3/1,000.

Race and Socioeconomic Status

The incidence of SIDS among non-white infants is nearly two-thirds greater than among white infants. Multiple studies also have implicated low socioeconomic status as a factor associated with an increase risk of SIDS.[13] Multiple factors influencing these findings have not undergone statistical segregation to determine what the causative factor might be in underprivileged or non-white populations.

Other Factors

Maternal age at birth, feeding histories, and plural births have also received close analysis. The curious findings of increased incidence among either one or both members of a twin pair have been intriguing; however, insufficient numbers prevent explanation apart from the effects of low birth weight and reduced gestational age. Maternal age over 20 does not appear to influence the incidence of sudden infant death syndrome, nor does the feeding regimen chosen by the mother.[14, 17, 18] Recently, another "associated factor" has been reported by Anderson and Rosenblith,[19] who described 17 sudden infant deaths among 802 infants (an exceptionally high incidence of 21.1:1,000) who had poor performance on tactile-adaptive scores on the Rosenblith modification of the Graham scale of infant behavior. They also found several "problem" infants who had other associated difficulties in the newborn period, such as increased oxygen requirements.

Pathophysiological Hypotheses

The cause of SIDS is unknown. To date, we are able to examine only hypotheses about the cause and pathophysiology of this entity. Although a multitude of hypotheses have been suggested, none have been tested or proven. In this discussion, only two hypotheses will be considered: (1) that SIDS is caused by infection, and (2) that SIDS occurs because of prolonged or recurrent apnea.

The Role of Infection

Multiple observers have mentioned the apparent association of an upper respiratory tract infection preceding the actual death of an infant. The epidemiological findings of seasonal variance, age distribution at the time of postnatal immunologic development, and pathological evidence of mild inflammatory infiltrates, even though insufficient to cause death, have all been voiced as arguments supporting the infectious nature of sudden infant death syndrome.

Sutton and Emery[20] isolated more pathogens from SIDS families than controls. Kerenyi and Fekete[21] found pathogens in 28 of 40 consecutive SIDS cases. Enteric pathogens were found in abnormal numbers and distribution by Bendig.[22]

Viral agents have been implicated as a cause for the findings of lower respiratory tract inflammation present on postmortem examination.

Ferris, *et al.* reported 16 of 51 infants with histological appearance in the lungs of lymphocytic bronchiolitis and from this group, respiratory syncytial virus (6), influenza A (2), parainfluenza type 3 (1), H strain rhinovirus (1), and adenovirus types 1 or 5 (3) were found.[23] Ray and Hebestreit[24] found no evidence of viremia in 119 cases of sudden infant death syndrome, and only four cases with detectable serum interferon. Similarly, Clausen *et al.*[25] found that serum IgM and IgE, and beta-1-C complement levels were not different in infants dying of the sudden infant death syndrome when compared to infants dying of causes of death determined. Furthermore, cord or death serum specific antibody titers to 14 common viral antigens did not reveal titers characteristic of viral infection in sudden infant death syndrome victims.

The Role of Recurrent Apnea

Steinschneider[26] has demonstrated that in patients referred for recurrent apnea episodes, apnea occurred most frequently with rapid eye movement (REM) sleep. However, there appeared to be a decrease in amount of apnea after a certain age. Apneic episodes occurred most frequently associated with REM sleep, and all infants had a number of prolonged apneic and cyanotic episodes during sleep serious enough to require assistance to establish breathing. Steinschneider also found that prolonged apnea most often occurred in conjunction with an upper respiratory infection. He concludes that the age-related incidence of SIDS would, in part, be secondary to the age-related incidence of sleep apnea. Other factors that must be con-

sidered are the probability of a respiratory tract infection in early infancy and the possible age-related affect of such an infection on the induction of prolonged apnea. This important pathophysiologic observation tied together two consistently observed epidemiological factors previously never correlated.

Management

Without a sound understanding of the causative factors of the syndrome, considerable emphasis must be placed at the present time on skillful management of the aftermath of SIDS.

With the paucity of information currently available for prediction of infants at risk for sudden infant death, the physician's role most frequently begins when called by grief-stricken parents or when presented with a dead infant in the emergency room. In either case, the physician can play an essential role in comforting the parents and establishing a relationship with parents that may substantially alter psychologic sequelae after such a tragedy.

The sudden loss of a presumably healthy infant evokes feelings in parents more profound than loss from accidents, malformation, or prematurity. Emery[27] states that the baby's death seems completely meaningless, and since the baby appeared to be completely normal, they (the parents) feel that the death was, in some way, their fault. Fundamental to the resolution of these deprecatory feelings is the establishment of the cause of death. Since the sudden infant death syndrome remains a diagnosis of exclusion, thorough postmortem examination is essential. The physician can facilitate the autopsy permission based upon preexisting doctor-family relationship and can serve as a familiar translator of autopsy findings. If death results from the sudden infant death syndrome (and this will be the cause in 85% of cases), reassurance that the death was not preventable should be communicated to the parents. The agonizing self-recrimination of whether "one last look" or "if I'd checked the baby more often" of parents can be adequately prevented in most cases. This can only be done with confidence if the cause of death is known. The earlier this information can be communicated the better. Followup conferences with parents and other family members can assist families in handling characteristic grief reactions. Based on a national survey, Bergman[28] has made four general recommendations toward setting minimum standards for handling SIDS, which he feels should exist in all communities:

1. Autopsies should be available on all children who die suddenly and unexpectedly, and should be performed by qualified pathologists;
2. The term "Sudden Infant Death Syndrome" should be utilized as a cause of death on death certificates;
3. Families should be notified either by telephone or letter of the autopsy results within 24 hours;
4. Followup information and counseling about SIDS and the characteristic grief reactions should be provided by a knowledgeable health professional.

Unfortunately, the above recommendations are not universally followed. Bergman found, in a study on how sudden infant death syndrome is managed in several states, that 14 per cent of the afflicted parents never learn why (so far as it is known) their infants died. Fifty per cent feel that they were not given adequate explanation. In about one-third of the cases, the parents are told one cause of death and see another cause written on the infant's death certificate.

Thus, in many unfortunate, grief-stricken parents, lack of communication by physicians and their lack of immediate intervention with concern, information, and followup results in psychiatric casualties that can be preventable.

Throughout the United States, parents and physicians have formed groups to assist families confronted by SIDS. In the Kansas City metropolitan area, a representative of Kansas City Chapter of the National Foundation of Sudden Infant Death, Inc. is available 24 hours a day by phone to assist physicians and families who encounter SIDS. They provide information concerning the syndrome to parents and families, they will assist in obtaining postmortem examinations, and they stand ready to support the parents during their period of grief and bereavement. A similar group of parents and health professionals serve in a similar capacity in the Wichita area. In other areas, pediatricians, family physicians, and social workers must assume the role of effective communication with afflicted families.

Pathologists and coroners must assume the role of quick and accurate reporting of the syndrome. Appropriate epidemiological data for the affected population can better define the incidence and patterns of occurrence. Furthermore, research efforts in all aspects of the disorder require support at all levels until the cause of this tragedy is fully defined.

Summary

Several useful pieces of the epidemiologic puzzle of SIDS appear to be intrinsically interconnected by physiological development during the early infant period. The roles of a maturational lag of the respiratory, cardiovascular, and nervous system as influenced by such factors as low birth weight, reduced gestational age, socioeconomic factors, race, and sex remain to be con-

cisely demonstrated. Finally, the compounding of the above factors and seasonal variation as well as infectious agents add additional complexity to the problem of seeking causative factors for the sudden infant death syndrome. However, lack of knowledge of the cause of SIDS should not jeopardize the role of physicians in optimal management of the problems that attend parents and families in the aftermath of SIDS. Parents and families need support, understanding, information and counseling, and the family physician or pediatrician is uniquely qualified to respond to those needs.

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Mark Your Calendar Today!

116th KMS ANNUAL SESSION

May 4-7, 1975 Glenwood Manor Overland Park

Please note: **House of Delegates First Session will convene May 4, Sunday, at 9:00 A.M.**

Pediatric—Pulmonary Embolism

Thrombophlebitis in a Child

RONALD D. GREENWOOD, M.D. *and* **HOWARD S. TRAISMAN, M.D.,**
Chicago, Illinois

DEEP VEIN THROMBOSIS (DVT) with secondary pulmonary embolism is commonly encountered in adult medicine,[1, 2] yet in pediatric practice this entity is apparently quite rare. Although instances of thrombosis and pulmonary embolism have been reported in children,[3, 4] they are extremely uncommon and are not summarized in standard pediatric textbooks. In Emery's study[5] of 25 children with pulmonary embolism, none resulted from DVT in the extremities.

Case Report

A 14-year-old white female was the product of a normal pregnancy and delivery. At two months of age she fell, hitting the left parietal area, producing a large hematoma which gradually resolved. The remainder of her childhood and development history was normal. Recurrent headaches associated with pain in the left eye had existed since early childhood, with an exacerbation in the last month with swelling of the left eye. Family history was negative, except for a sister with congenital heart disease. Our patient sustained trauma to the left knee five months previously, while playing volleyball. There was no history of drug ingestion.

Examination on admission was normal except for dental and neurologic abnormalities. A carious lesion was noted in the upper-left second molar, which was very sensitive on percussion. There was diminished pain and touch sensation in the left face (V cranial nerve) and a diminished corneal reflex on the left (V), mild facial weakness (VII cranial nerve, right), deafness in the right ear (VIII cranial nerve), and an absent gag reflex.

Laboratory evaluation revealed complete blood count as noted in *Table I,* normal urinalysis, sedimentation rate, electroencephalogram, roentgenograms of skull, chest, cervical spine and optic foramen, brain scan, left jugular venogram, cerebrospinal fluid and cultures of blood, urine, and throat. An audiological evaluation revealed a complete sensorineural hearing loss.

Hospital Course

The patient was treated with Decadron (Dexamethasone) and Polycillin (Ampicillin) for probable cavernous sinus thrombosis. On the fifth day, the carious tooth was extracted and the pulp was found to be purulent. On the 11th day, minimal ptosis and proptosis of the left eye was noted for the first time. On the 19th day of hospitalization, a generalized macular-papular rash, felt to be related to Ampicillin, was noted and that drug was substituted with Keflin (Sodium Cephalothin).

A case report of a child with an unusual presentation of recurrent DVT and pulmonary emboli, who was successfully treated with long-term anticoagulants, is presented.

On the 21st hospital day, she developed pain and tenderness in the left calf with localized tenderness, heat, and a positive Homans' sign. A diagnosis of deep vein thrombophlebitis was made and treatment was started with Butazolidin (Phenylbutazone), hot packs, elevation, and stockings.

Further diagnostic evaluation was then undertaken. Serial complete blood counts are shown in *Table I,* and reveal a transient polycythemia and leukocytosis. An intravenous pyelogram showed duplication of the right kidney and ureter. The chest roentgenogram, electrocardiogram, serum transaminase, lactic dehydrogenase, alkaline phosphatase, phosphorus, bilirubin, blood urea nitrogen, creatinine, glucose, glucose-6-phosphate dehydrogenase, Reiter's protein, lupus erythematous preparations, hemoglobin electrophoresis, latex fixation, prothrombin time (PT), clot retraction, celite partial thromboplastin time (PTT), and urine for amino acids were all normal. An erythrocyte sedimentation rate was now 36 mm/hr.

All symptoms and findings cleared and the patient was discharged on the 35th hospital day.

From the Children's Memorial Hospital and the Department of Pediatrics, Northwestern University Medical School, Chicago, Illinois.

Address reprint requests to: H. S. Traisman, M.D., 1325 W. Howard St., Evanston, Illinois 60202.

TABLE I

SERIAL HEMATOLOGIC DETERMINATIONS

Hospital Day	*Hgb*	*Hct*	*WBC*	*Polys/ Bands*	
1	16.5	47.3	8,000	82	2
14	16.2	47.1	16,900	81	2
18	17.0	49.3	21,100	80	4
19	18.1	54.0	19,800	75	11
20	16.8	48.4	27,600	71	8
21	16.8	47.4	26,800	76	1
22	17.3	49.6	26,800	84	5
23	13.2	40.6	17,000	0	0
24	13.5	40.9	10,500	58	12
28	12.6	39.4	12,100	48	11
32	14.0	44.0	9,600	60	5
35	14.0	42.0	8,000	71	3

Subsequent Course

Three days later, this child was again hospitalized for recurrent pain in the left posterior thigh and gastrocnemius muscles without other local changes and with a positive Homans' sign. The remainder of the examination, including gynecological, eye and visual fields, was unchanged.

The hemoglobin was 15 Gm/100 ml, hematocrit 44.8 per cent, and white blood count (WBC) was 9300/cu mm with a normal differential. The PT, PTT, platelet count, bleeding and clotting times, amylase, lipase, uric acid, immunoglobulins, SGOT, SGPT, LDH, bilirubin, urine, antinuclear antibody, urine test for homocystine, bone survey, upper and lower gastrointestinal series were normal. The techniseum human albumin microsphere lung scan revealed multiple defects in both lungs typical of multiple pulmonary emboli. The patient was then started with local treatment and anticoagulants, initially Heparin and then Coumadin (crystalline Warfarin Sodium) with good response. The patient was discharged after two weeks in the hospital.

Two weeks later, she was readmitted with pleuritic chest pain and left calf pain. There was a positive Homans' sign, and a diagnosis of acute thrombophlebitis of the left deep saphenous vein was again made. Clotting studies revealed adequate coumedinization, and a chest roentgenogram and a bilateral venogram of the lower extremities were normal. The patient was treated conservatively and discharged.

Two months later, she was admitted for repair of recurrent dislocation of the left patella, resulting from the injury sustained five months before her first admission.

She was then followed for 6 months with Coumadin therapy and an additional 14 months without therapy; there was no recurrence.

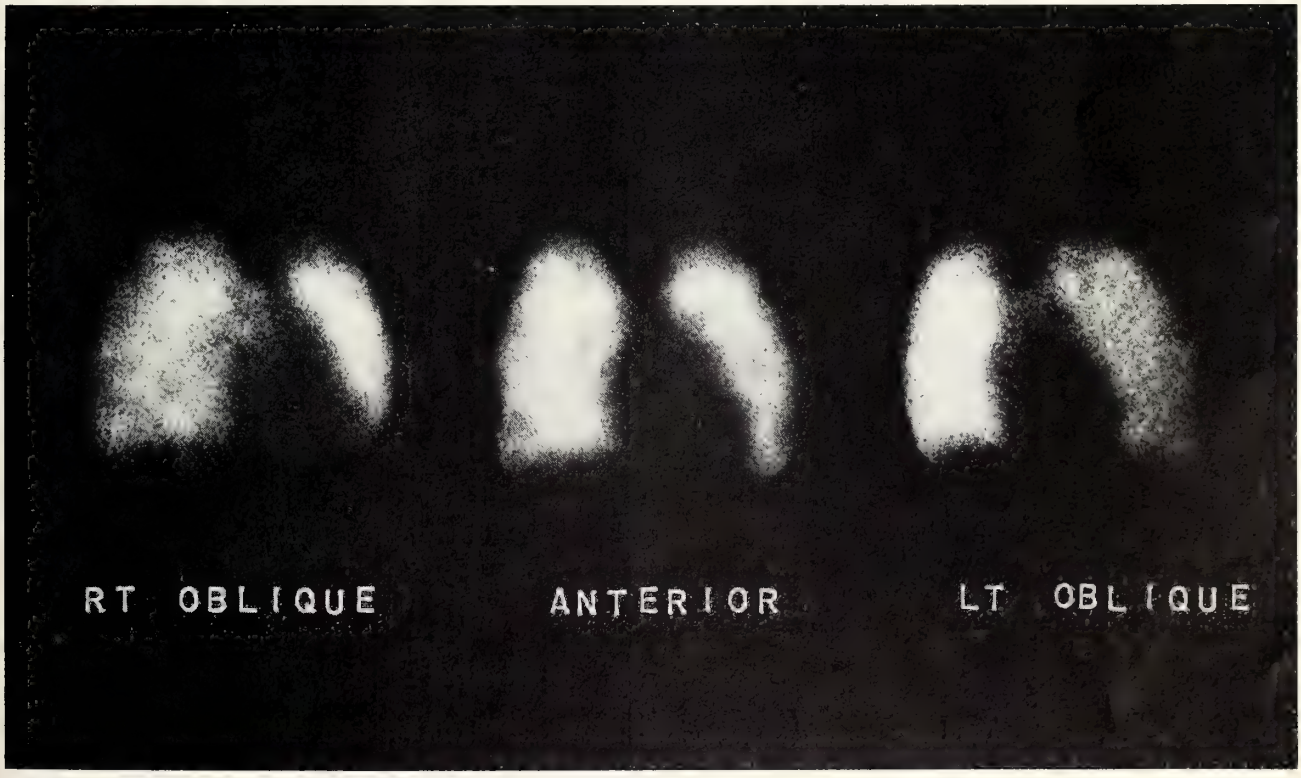


Figure 1. Lung scan demonstrated multiple defects in both lungs typical of multiple pulmonary emboli.

Discussion

DVT in childhood is rare, and when combined with secondary pulmonary embolism the clinical presentation is unusual.

A clinical diagnosis of cavernous sinus thrombosis presumed secondary to dental abscess was made on the initial hospitalization despite the confusing history and congenital neurologic findings, and this child responded to antibiotic and steroid therapy. During her hospitalization, she developed DVT with no definite etiology, despite a thorough search. The only positive finding, transient polycythemia, cannot be explained and has not recurred. Evaluations at two recurrences, one with documented pulmonary emboli, also revealed no cause for the DVT. It is believed that the antecedent injury to the left leg, which was severe enough to require subsequent surgery, is a likely cause for the DVT with recurrent mild trauma leading to the last hospitalization. However, one cannot ignore the participation as etiologic factors of hospitalization with resulting partial immobilization,[2] mild polycythemia,[2] cavernous sinus thrombosis,[5] or dexamethasone administration.[6]

Venous thrombosis and consequent pulmonary embolism in adults may commonly result from trauma, infection, immobilization following surgery, pregnancy, contraceptives, varicose veins, malignancy, cardiac disease with heart failure, polycythemia and obesity.[1, 2] In childhood, DVT appears most commonly to follow local infection. However, systemic infection, local trauma, postoperative status (immobilization), post-intravenous infusion, thrombophlebitis migrans, post upper-respiratory infection and gastroenteritis or vasculitis,[4, 7] and rarely in homocystinuria,[8] congenital factor VII deficiency,[9] or congenital factor V elevation[7, 10] may be etiologic factors of DVT.

Evaluation of large numbers of adults with DVT has shown that pulmonary emboli develop frequently and in the majority of instances are silent,[11] and that anticoagulants administered after an initial pulmonary embolism result in significant reduction in mortality and in the incidence of recurrence of emboli.[12]

Although DVT is uncommon in childhood, awareness of its possibility should lead to early diagnosis, a thorough etiologic search, a lung scan—even in the absence of thoracic symptoms, and prompt treatment. As in this reported case, pulmonary embolism may follow. Even in the absence of systemic disease, continuous anticoagulation is suggested if the DVT recurs.

Summary

A 14-year-old girl developed recurrent deep vein thrombophlebitis and pulmonary emboli which was successfully treated with long-term anticoagulation. The pediatrician is reminded that this common adult syndrome may occur in childhood.

Acknowledgment

James Conway, M.D. did the interpretation of the lung scan.

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Kansas Breast Study

A Progress Report

NORMAN C. ESTES, M.D., PAUL A. MORSE, JR., Ph.D.,
WILLIAM R. JEWELL, M.D. *and* LOREN J. HUMPHREY, M.D., Ph.D.,
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EVERY 17 MINUTES, one woman in the United States dies of breast cancer; one out of every 15 women will, at some time, develop breast cancer; every 17 minutes around the clock, two or three new cases of breast cancer are diagnosed.[1] A current controversy over the surgical treatment of breast cancer (simple vs. radical) has tended to divert attention from the importance of early diagnosis. In spite of many advances in surgical treatment of other malignancies, only earlier diagnosis appears to offer much hope of improving the survival rate for breast cancer, which has hardly improved since the Halstead era. Several centers, including Kansas University Medical Center, are now engaged in mass screening, by radiological methods, for early detection of breast disease. This type of mass screening does result in early detection of breast cancer, but the yield is quite low. Certainly, one hope for early diagnosis has been for a test to detect malignancy while it is only microscopic or, more ideally, in a premalignant state. Attention has recently looked to serodiagnosis of cancer to accomplish this feat. Serodiagnosis of disease is not a new idea, but one needs to be reminded that in the early development of the serologic test for syphilis, Wasserman was incorrect in his understanding of the specificity of his test.

Recently, serologic diagnosis of cancer has received great impetus from the studies of carcinoembryonic antigen (CEA). While recent reports have brought forth many of the problems encountered in this type of diagnostic tool, Gold's contributions, nevertheless, opened widely this new area of tumor immunology.

The Kansas Breast Study was initiated in 1972, to further study an antibody which had been observed in the sera of three patients with breast disease.[2] Initial results are herein presented to show the benefit of the finding of antibody in patients with breast cancer. Like the Gold test, early detection of cancer is not at present possible due to insufficient specificity, however, the finding of antibody in patients with breast cancer appears to be of importance as a prognostic factor.

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Supported by grant #2 RO1 CA12869, from the National Cancer Institute, and by the Endowment Fund supplied by the Woman's Auxiliary to the Veterans of Foreign Wars.

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Materials and Methods

Serum Samples

Under the protocol of the Kansas Breast Study,[2] cooperating physicians throughout the state of Kansas obtained serum samples from patients undergoing breast biopsy. An initial serum sample was obtained prior to operation, a second sample at the time of suture removal, and a third sample at approximately one month following surgery. The harvested sera were mailed to our laboratory where the serologic testing was done.

Preparation of Breast Cancer Antigen (BCA) and Normal Breast Antigen (NBA)

BCA was prepared in a manner previously described.[3] In brief, the breast carcinoma obtained from liver metastases was homogenized in a Sorvall Omnimixer and subjected to a series of differential centrifugations to obtain cell sap, which was concentrated by ultrafiltration to one-half the original tumor volume. This concentrated cell sap was designated "BCA" and was used for immunodiffusion and immunoelectrophoretic analyses.

Normal breast tissue was obtained from a patient with virginal hypertrophy undergoing reduction mammoplasty, and was processed as above to yield "NBA."

To provide material suitable for complement fixation studies, both BCA and NBA were fractionated on Sephadex G-200 (85 x 5 cm column), using phosphate buffered saline (P-BS), pH 7.2, as the eluant. Pool #1 was concentrated by Diaflo ultrafiltration (PM-10 membrane) to the original sample volume applied to the column and used in complement fixation. NBA was fractionated in an analogous manner.

Immunodiffusion Analyses

Immunodiffusion analyses were performed according to Ouchterlony,[4] using 0.5 per cent agarose in PBS.

Plates were incubated at 4C. Lines of precipitation appeared after 1-2 days of incubation.

Complement-Fixation Test (CFT)

The CFT was performed as previously described[3] according to a modification of the technique of Wasserman and Levine.[5] Complement, antiserum, and antigen controls were included in every test. The reported titers are the highest serum dilutions which gave greater than 10 per cent complement fixation with no anticomplementary effect in the serum control.

Histopathology

Microscopic slides of the excised lesions from the patients with carcinoma and benign lesions were requested. Slides were examined to confirm the reported diagnosis, as well as to determine the presence of other histologic changes such as sclerosing adenosis, ductal epithelial hyperplasia, sinus histiocytosis, lymphocytic infiltration, and other histologic changes.

Results

Serum from 224 patients undergoing breast biopsy or mastectomy were examined by the two tests described above. At least two serum samples were available from 84 patients with carcinoma of the breast, and antibody to BCA was found in at least one sample in 46 per cent. Antibody to BCA was found in 34 per cent of patients with fibrocystic disease and 35 per cent of patients with fibroadenoma. Comparison of detection of antibody by each test, immunodiffusion or complement fixation, can be seen in *Table I.* Reactivity of serum antibody with NBA in comparison to BCA has been described previously.[6] Serum from 54 volunteers (44 females and 10 males without breast disease) were tested for presence of antibody to BCA with negative results.

Initial studies of tissue sections from patients with serum antibody and diagnosis of fibrocystic disease and fibroadenoma indicated a correlation between large duct hyperplasia and positive serum antibody; however, continued observation has shown many patients with no serum antibody to have large duct hyperplasia.

TABLE I

ANTIBODY IN SERA OF PATIENTS WITH BREAST DISEASE

Diagnosis	*No. Patients*	*Antibody Detected* I.D.	C.F.	BOTH	*Neg.*	*Total + (%)*
Carcinoma	84	9	25	5	45	39(46%)
Fibrocystic disease	96	4	25	4	63	33(34%)
Fibroadenoma	44	4	5	2	33	11(25%)

No correlation was noted between tumor type and the presence of serum antibody. Lymphocytic infiltration in the tumor and sinus histiocytosis of lymph nodes, however, did correlate in a positive manner with serum antibody to BCA.[7]

Discussion

In a preliminary study,[8] antibody was found in the serum of two patients with carcinoma of the breast and one patient with severe fibrocystic disease. Since these results raised the speculation that determination of the presence or absence of this antibody might aid in early detection or prognostication following therapy, the Kansas Breast Study was initiated to obtain sera from a large number of patients undergoing breast biopsy or biopsy followed by mastectomy. This study is carried out with the assistance of physicians throughout the state of Kansas. Serum samples are obtained before surgery, at the time of suture removal, and at the one month followup visit. Using immunodiffusion and complement fixation tests, antibody reactive with a breast cancer antigen was found in 46 per cent of 84 patients with the diagnosis of carcinoma of the breast. This low percent of positivity raised doubts as to the value of this test in early detection. However, since all of these patients already had a breast mass, this point was moot. The failure to detect antibody in 54 per cent of carcinoma patients may be due to either the lack of ubiquitous breast carcinoma antigen(s) or the non-cross-reactivity of antigen(s) in the breast carcinoma system. Another explanation might be that following radical mastectomy, sufficient tumor antigen remained to absorb antibody from the circulation and render antibody undetectable by test methods utilized. Milgrom[9] has reported an analogous situation in which antibody to renal allografts was demonstrated only after removal of a transplanted kidney in transplant recipients. The early clinical course of patients with positive axillary lymph nodes would support this explanation for at least some of the 54 per cent with undetectable serum antibody; *e.g.,* 11 of 13 patients with positive axillary lymph nodes and no antibody had recurrence or died within one year. In contrast, only 3 of 18 patients with positive axillary lymph nodes and antibody have recurrence of tumor from one to three years postoperatively. Interestingly, this raises the possibility that the presence of antibody postoperatively may be utilized for seroprognosis. The positive correlation of lymphocytic infiltration in the tumor in patients with antibody confirms other reports which have related lymphocytic infiltration with a more favorable clinical course. Additionally, the finding of marked histiocytosis of the lymph nodes appears to correlate well with the pres-

ence of antibody and has been previously reported to be a favorable prognostic sign.[10]

The finding of serum antibody in patients with diagnosis of the biopsy specimen as "fibroadenoma" or "fibrocystic disease" raises the question of the value of this finding in early diagnosis. Certainly, large duct hyperplasia, which is frequently associated with these benign lesions, has been shown to be a premalignant lesion.[11] Edynak[12] reported that histologically uninvolved breast tissue or contralateral breasts in breast cancer may have antigenic activity, and this activity was associated with large duct epithelial hyperplasia. His data suggests that the antigen is a product of a primed cell with malignant or near-malignant physiology. While we have been unable to show a definite correlation between large duct hyperplasia and serum antibody, we are continuing to observe whether the presence of antibody has value in the early diagnosis of breast cancer, or whether premalignant lesions trigger immunologically unrelated antigen-antibody reactions.

Summary

Data on the presence of serum antibody to a breast cancer antigen in 224 patients undergoing breast biopsy or mastectomy reveals positivity in 46 per cent. The presence of serum antibody appears to be of prognostic value, since a more favorable prognosis is observed in those patients with metastatic carcinoma of the breast and postoperative detection of serum antibody.

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AMA House of Delegates

(Continued from page 6)

to inspection so that he/she may profit educationally; and referred back to the Judicial Council for further study a report involving three cases of alleged violation of due process at the local level.

Guidelines for Housestaff Contracts

The House adopted a set of revised guidelines for housestaff contracts. The proposed guidelines, as revised, had been approved by the Council on Medical Education, the Board of Trustees, and the Council on Medical Service.

Continuing Competence of Physicians

Delegates also adopted a Board report calling for strong programs of continuing medical education and peer review as alternatives to relicensure since "the difficulties inherent in relicensure clearly outweigh any potential benefits."

Specific recommendations include all possible encouragement and support for the AMA, constituent societies, JCAH, and other bodies in expanding CME programs; that the AMA give high priority to enhancing and reviewing effective methods of continuing competence; that patient satisfaction should be included in performance evaluation; and that well-designed peer review programs be endorsed as an important component of performance evaluation. The House also stressed that evaluation of performance, rather than knowledge per se, is the best method of appraising competence in patient care.

In other actions related to physicians, hospitals, and medical schools, the House:

—Adopted an amended resolution which urges that duplication of local peer review procedures be avoided; that medical audit or utilization protocols used in screening be limited to those which are demonstrated to be valid, reliable, and which do not add needlessly to cost; and that when local peer review groups recognize that a hospital medical staff has adequate medical audit and utilization procedures, that fact should be recognized by governmental agencies and JCAH.

—Adopted a Board report detailing legally-approved methods for the exchange of information between and among medical societies and hospitals concerning a physician's hospital privileges or practice.

—Requested that a "comprehensive report" be pre-

sented at the 1975 Annual Meeting on questions and issues related to foreign medical graduates.

Physicians and the Government

National Health Insurance

Delegates gave the Board of Trustees a vote of confidence for its efforts to develop new approaches to NHI which maintain traditional AMA goals. The House adopted a Board report containing basic guidelines for NHI deliberations.

The guidelines include minimum federal involvement in the administration of any NHI program; state jurisdiction for licensure of physicians and regulation of insurance; no Social Security tax financing and administration of any program; funding through federal revenues, state revenues, and private funds including employer-employee contributions for private health insurance; comprehensive coverage for basic and catastrophic needs; and the maintenance of pluralism in health delivery.

Manpower and Planning Bills

The House adopted an emergency resolution expressing unanimous opposition to US House of Representatives bill (HR 16204) which would divide the nation into health service planning areas and treat health care as a public utility, and (HR 17084), the Health Manpower bill, which would require medical students to reimburse the government for capitation grants.

The resolution was unanimously adopted on Wednesday, December 4, and its substance presented to House Speaker Carl Albert and other Congressmen.

Prepaid Plans and Bonuses

Delegates adopted a Judicial Council report which cautions that the payment of bonuses to physicians in prepaid health care plans such as HMOs for minimizing the utilization of services may interfere with the physician's obligations to his patients.

In other actions related to physicians and the government (and third parties), the House:

—Objected to language in insurance letters indicating the claims were "not medically necessary," since this encourages patients to decline to pay for services and is defamatory to physicians.

—Urged that Medicare intermediaries adhere strictly to regulations for reimbursement of chiropractors to those procedures defined in the regulations.

—Urged the government to continue its present 55 mph speed limit for at least a one-year period, noting that traffic fatalities have declined 14.8 per cent since the speed limit was imposed last year.

Physicians and the Public

Weight Reduction Clinics

The House took a strong policy position against the use of human chorionic gonadotropin for use in weight reduction. The House further resolved "that the AMA warn our citizens about the potential danger of such a weight control program." Clinics utilizing chorionic gonadotropin have been established and widely advertised in various parts of the country.

Child Abuse

The House adopted a substitute resolution encouraging state medical associations to survey child abuse laws in their states, and recommend more desirable legislation where necessary.

Maternity and Newborn Care

The House adopted two reports which reaffirm AMA policy to encourage insurance coverage of the newborn from the moment of birth, urge the health insurance industry to offer coverage for obstetrical care and any complications, and recommend that the insurance industry—as well as government—offer such coverage on the broadest possible basis.

In other actions relative to physicians and the public, the House:

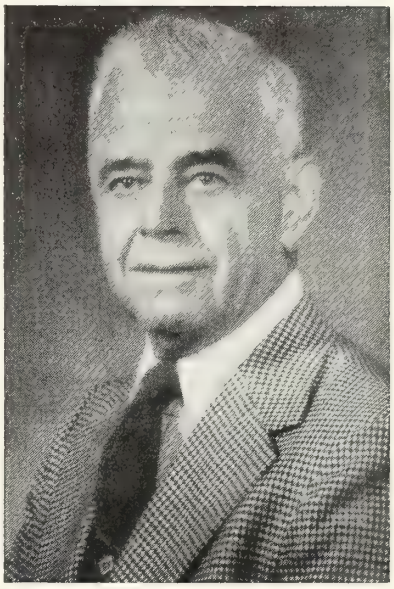
—Supported state legislation to regulate the practice of acupuncture. The new policy says acupuncture should only be performed in research settings by a physician or under the direct supervision of a physician.

—Adopted a Judicial Council report which holds that, "It is not unethical for a physician to authorize the listing of his name and practice in a (community) directory for professional or lay use which is intended to list all physicians in the community on a uniform and nondiscriminatory basis. The listing shall not include any self-aggrandizing statement or qualitative judgment regarding the physician's skills or competence."

—Endorsed the right of a physician to dispense ampicillin-probenecid for gonorrhea patients, reflecting a Judicial Council opinion that physicians have a duty to protect the confidentiality of patients who contract gonorrhea.

Several late resolutions were introduced on the floor, including Kansas Resolution No. 74F-13 (National Health Insurance). However, the delegates chose not to consider any of these.

The President's Message



Note: Dr. Blank has invited Dr. H. Thomas Gray, Chairman of the Legislative Committee, to use the President's Page this month for a message to the members of the Kansas Medical Society.

The 94th Congress and the Kansas Legislature are both in session. There is no doubt that many legislative measures will be introduced at both the federal and state levels which will affect the medical profession.

At the federal level, the regulations will need to be written and implemented on the recently passed National Health Planning and Resources Development Act of 1974 (PL-94641), provided it withstands AMA's challenge of constitutionality. It seems likely that another health manpower bill will be introduced into this Congress. Congressmen and HEW are aware of the problems surrounding the availability and cost of professional liability insurance; it may well be that federal legislation will be introduced to help relieve this problem. National health insurance is an ever-present possibility in time.

At the state level, many bills which affect the medical profession have already been introduced and others will be introduced. Legislation to help relieve the professional liability problems is a must, and this can best be corrected at the state level.

The state Society's Legislative Committee is meeting regularly in an effort to keep abreast of this continued flow of legislation, and to keep the state and county executive committees and councils informed of these bills. The Society and the Legislative Committee need the help of every member, because if we fail to try to direct some of these changes, we will be the victims of change.

The key-man concept is being reinstituted through the Council district system. Each Society member may be asked by his Councilor to be responsible for making the Society's opinion and concerns known to his federal and state legislators. The importance of each member's participation is obvious, and undoubtedly all of us are aware of the need to be involved in the political process.

H. Thomas Gray, M.D., Chairman
Legislative Committee



Provide and Conquer

Devising the laws he lives by occupies a major part of man's time and talents. His progress in any one direction is usually accomplished, of course, against an opposing and just-short-of-equal effort. This constitutes the noble democratic process assuring us the result is the best and highest hope for the moment. Curiously, though, our lives are regulated only indirectly by these democratic expressions, because the application of the new law is not accomplished by some hierarchal fiat but by its translation into a number of bureaus, offices, and individuals charged with carrying out the presumed intent of the law.

In addition, the success of the legislative effort is assured by the provision of certain monies to which the objects of the legislation rapidly become addicted, thereby assuring that the pusher-bureaucrat will have a continuing control.

These somber assessments—no news to anyone past the Pamper stage—came to mind as we formulated our perhaps too obtuse comments regarding the generic drug flap in these columns last month. That particular situation exemplifies the manner in which a governmental body can insidiously (but as rapidly as control can be applied) use the authority deriving from some legislative enablement to work its will. Society has survived because some of these edicts have been beneficial but the process creates a survival-in-spite-of, not because-of, feeling. And to the physician, this government by appointive agent is a nettlesome thing since he does not take kindly to regulation and directive—even those promulgated by his own colleagues.

We become so involved in accommodating to the day-to-day incursions from these quarters that periodically we have to pause for breath and ponder how all this came about. With no firm answer to that, we suggest there may be merit in trying to foresee further applications of this government-by-seepage. One recalls that in their time, public health reforms came largely by the exercise of individual authority—non-elective—and certainly the benefits thoroughly obscure some of the pointless and nonproductive activities. More recently, medical care for the elderly became of prime concern. No argument there—and in spite of the charges by certain antagonists, physicians did not oppose the concept but the method. The plan for care of this group is now established and, whatever changes may be wrought from time to time will be in terms of extension, not curtailment. Then the impoverished, medically and more so, were brought into the shelter—or rather, the shelter was enlarged and renovated—and it is certain there will be no evictions. Maternal and child health has received varying degrees of attention and will undoubtedly move into total inclusion. After the fact, who will say it should not be so? The proposals of yesterday become the necessities of today. Again the methods may be challenged but the struggle becomes not whether to have the service but how. Even as some say, "This far and no farther," some group will move, by a circuitous route, onto the road up ahead and there will be a filling in of the column in between—and so on to the next stage.

Our present purpose is to report that reference to our clouded and crazed crystal ball has come up with a prediction of a future move by HEW (as the generic drug thing becomes an established way of life).

Aux laboratoire, mes amis!

With hardly a change in script, the agency can mount the attack. What is the first cry that greets us each day? Health care costs are outrageously high and climbing. Clearly something must be done and the doing can best be accomplished in relation to the ease with which a given area of cost can be identified. To the bureaucratic mind, laboratory service should be a natural. Here is a significant segment of medical care cost for which a monetary figure can be derived from hospital bills, insurance reports, published fee schedules, and the guesses, educated and otherwise, that go into the development of

such figures. This can be brought to the public attention with appropriate implication that there must be something unholy about anything that costs that much. The citizen-outpatient who may have contributed in person to the figure—with only a faint idea of the purpose of his laboratory procedures and no idea of the technical requirements—can readily see that he has been taken. The hospital patient, who recalls only that his cutaneous integrity was violated numerous times by some kid in a white coat, observes as he peruses his ransom note that "Laboratory Services" account for a figure which, even with insurance coverage, implies that this same kid was some latter day alchemist trying to turn his blood into gold. No, the public doesn't understand what the laboratory procedures are all about but it understands that they must be too high.

Laboratory tests have another salient feature which recommends them to the bureaucrat: more than most medical services, they can be labeled and concisely packaged. With a charge assigned to a specific test (and the conviction that the total of these is too high) it is a simple matter to conclude that each charge can be reduced by factor x with a significant saving in the total. In other words, when stating the problem, use the big figure for effect; when proposing the solution, use the small figure to show how easily it can be reduced.

A standard feature of the bureaucratic approach, gleefully picked up by the Sunday supplements, is the exposure of the unconscionably excessive or inappropriate use of the thing it wishes to control. Someone will "expose" the fact that many laboratory procedures enjoy the sanctity of being called "routine," which often means, in fact, that its value is dubious but which will be interpreted as meaning that no distinct benefit to a particular patient can be demonstrated and it was therefore unnecessary (and performed for the remuneration of the laboratory). It will be "discovered" that a certain number of tests fall in the defensive category—of doubtful value to the patient's welfare but important protection for the physician against the possibility of legal action. It will be disclosed that tests have been ordered for the purpose of teaching a student rather than because of the specific need of the patient. Furthermore, look at the number of "normal" results, "normal" being equated in the lay mind with unnecessary. Unidentified sources will report physicians who couldn't recall for sure just why they did order a certain test or were hazy about what it would tell them, who ordered repetitive or duplicative tests—and certainly physicians who didn't know what the test would cost. The fact that the modicum of fact applying to these "exposures" is insignificant compared to the benefits of the proper and legitimate use of the laboratory is ignored. But once more the medical profession is put in a sort of have-you-stopped-beating-your-wife position.

There is yet another feature of the laboratory service which makes it vulnerable. It is, to the patient, a relatively detached and impersonal activity as compared with his intimate relationship with the physician. We admit to the conviction that it is only the force of this relationship which has spared the clinician from a more complete invasion of his office than already exists. So far, the public has, perhaps unconsciously, resisted this invasion because the physician's private office—or the hospital bed—has been the point of personal contact with the physician, the focus of the private and personal character of the process, the place where he is an individual rather than a unit of contribution to some staggering figure. This is why the medical community, encompassing all of these elements, can be criticized but the physician can individually retain a high level of respect and appreciation. The patient has no particular feeling for the laboratory and would probably have no interest in preventing its regulation and control by some governmental agency.

In short, the method is relatively simple. Establish control over those services that are peripheral or those with a distinctive social appeal. Taking them piecemeal, furthermore, diminishes the likelihood of concerted resistance by the profession. Don't work directly on old Doc Yak because the public still has kindly feelings for him, but pick off his ancillary services one at a time by agency resolution—a tidier and more effective approach in the long run than legislative confrontation. But the physician has—or should have—the uneasy feeling that when enough of his satellites have been brought under federal control so, to all intents and purposes, will he be.

Well, the crystal ball just shattered. Overexertion, perhaps—or just getting overheated?—*D.E.G.*

Letters to VOX DOX should be addressed to the Vox Dox Editor, Journal of the Kansas Medical Society, 1300 Topeka Avenue, Topeka, Kansas 66612.



The Polls Parade

There have been a great many polls taken recently concerning physicians attitudes about PSRO. The following are some excerpts from one such recent poll. Our comments follow.

Most of the doctors who favor PSRO (46.9%) are either hospital based, under 45 years of age, or live in the Northeast. The specialists inclined to favor PSRO are pediatricians, psychiatrists and internists, while general practitioners, general surgeons, and osteopathic physicians are likely to be opposed. The survey indicates that the majority of doctors see the PSRO program as failing to accomplish its goals: rather than cutting the costs of Medicare/Medicaid as expected by Congress, nearly two out of three physicians surveyed believe that costs will escalate. Most also feel that the organizations will either lengthen hospital stays or have no effect on them. Two thirds of the physicians surveyed predict that the volume of unnecessary diagnostic tests will either increase or remain the same, as the result of PSROs. And the incidence of malpractice suits is expected by 75 per cent of those polled to remain the same or increase. A general feeling among the majority of the physicians polled is that confidentiality of medical records will be jeopardized by PSROs. Doctors who responded to this survey indicated that they feared a loss of income as a result of PSRO.

Perhaps we should have a poll on physicians' attitude about polls. After reading the above, one could safely say that most physicians are not enamored with the PSRO concept. One does not know whether the survey is statistically valid or not, but it undoubtedly reflects the thinking of a great many physicians.

But if PSRO is so bad, why do we have it? We cannot comment on the above poll—it speaks for itself, but we can comment on why we have PSRO.

Another set of statistics was published recently which stated that the federal government now pays for 30 per cent of the health care delivered in this country. It was also pointed out that when a national health insurance program is enacted, that figure will climb much higher. Therefore, the federal government requires a system of accountability for its payment mechanism. A degree of quality assurance may also be inserted into that system. While the payment mechanism will not be handled by the Foundation, the quality assurance portion *must* be handled by the Foundation.

It is frequently heard that PSRO will be repealed because of funding problems; lack of acceptance by the physicians; the Congress didn't realize the scope of the bill which they passed; recent Medicare regulations will circumvent the PSRO, etc. Of course, anything is possible—but what is the alternative? There *will* be some system of accountability, and it is imperative that the physicians retain a degree of control in that system, whatever that system may be.

At the present time, that system is PSRO, and Kansas physicians must accept the opportunity and the challenge of making that system work, to prove that the way medicine is practiced in Kansas is on a high plane indeed.

As usual, your comments and criticisms are welcome. —*J.E.A.*

Obituaries

JOHN I. DAVIES, M.D.

Dr. John I. Davies, 56, of Topeka, died January 7, 1975. He was born June 20, 1918, in Aberdeen, England.

Dr. Davies was graduated from the Cambridge University School of Medicine, London, in 1940. He joined the medical community of Kansas in 1959.

Surviving Dr. Davies are his wife, two daughters, and three sons.

LELAND F. GLASER, M.D.

Dr. Leland F. Glaser, of Hutchinson, died December 20, 1974, at the age of 71. He was born April 29, 1903, in Ozawkie.

Dr. Glaser was graduated from the University of Kansas School of Medicine in 1932. He established his medical practice in Hutchinson in 1946.

Survivors include his wife, a daughter, and a son.

VICTOR E. WATTS, M.D.

Dr. Victor E. Watts, 96, of Smith Center, died December 31, 1974. He was born November 26, 1878, in Unionville, Missouri.

Dr. Watts was graduated from the Kansas Medical College, Topeka, in 1907. He practiced medicine in Kansas since that time.

Surviving Dr. Watts are three daughters and two sons.

Vox Dox

Vox Dox Editor:

The existence and consequences of emotional and psychological illness in physicians, as well as of pathological conditions that may impair the doctor's judgment and skill, are issues of paramount concern to the medical community.

Organized medicine, by virtue of its professional commitment to the public welfare, must now work toward developing a more viable strategy of identifying and guiding those physicians who have become disabled because of mental disorders, alcoholism or drug dependence.

The American Medical Association, through its Department of Mental Health, will sponsor this spring a milestone national conference dealing with the disabled physician. We sincerely hope that many of you can attend.

This meeting will be held in San Francisco at the St. Francis Hotel on April 11-12. It will focus on the issues of motivating the disabled physician to seek advice and treatment, and exploring alternative procedures to insure the effective treatment, rehabilitation and disciplinary action, when necessary, of the disabled physician.

Another charge of the conference will be to examine various options for legislative support, including AMA's "Disabled Physicians Act." As many of you may know, the AMA has developed model legislation in the form of a uniform state law. The approach taken through this draft bill is preventive rather than punitive. What is really intended is to find and treat the physicians with these kinds of disabilities.

Failing other more informal procedures, the model legislation provides for restriction, suspension or revocation of a practitioner's license for reasons arising out of physical or mental illness.

Alcoholism and drug addiction in physicians, for example, often emerge as problems of significant human tragedy and professional devastation. Now is a critical point in medical history for us to *assume* and *exercise* our full responsibility in providing competent care to patients. Accountability within the profession's ranks and, more importantly, for the public welfare has long been organized medicine's professional commitment as the healers in society.

Therefore, we hope you can participate at this landmark meeting. For more specific information concerning the conference, we urge you to contact AMA's Department of Mental Health.

MALCOLM C. TODD, M.D., President
American Medical Association
Chicago, Illinois

IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid,* 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co
Medical Department, Box 5110,
Chicago, Illinois 60680

454 R

When diarrhea has his number...



Lomotil puts him back in the game.

Physicians and patients both want prompt control of the symptoms of diarrhea. A rapid, uncontrolled loss of fluids and electrolytes can cause a medical crisis, particularly in children, and in patients who are seriously ill, or in people who are badly undernourished.

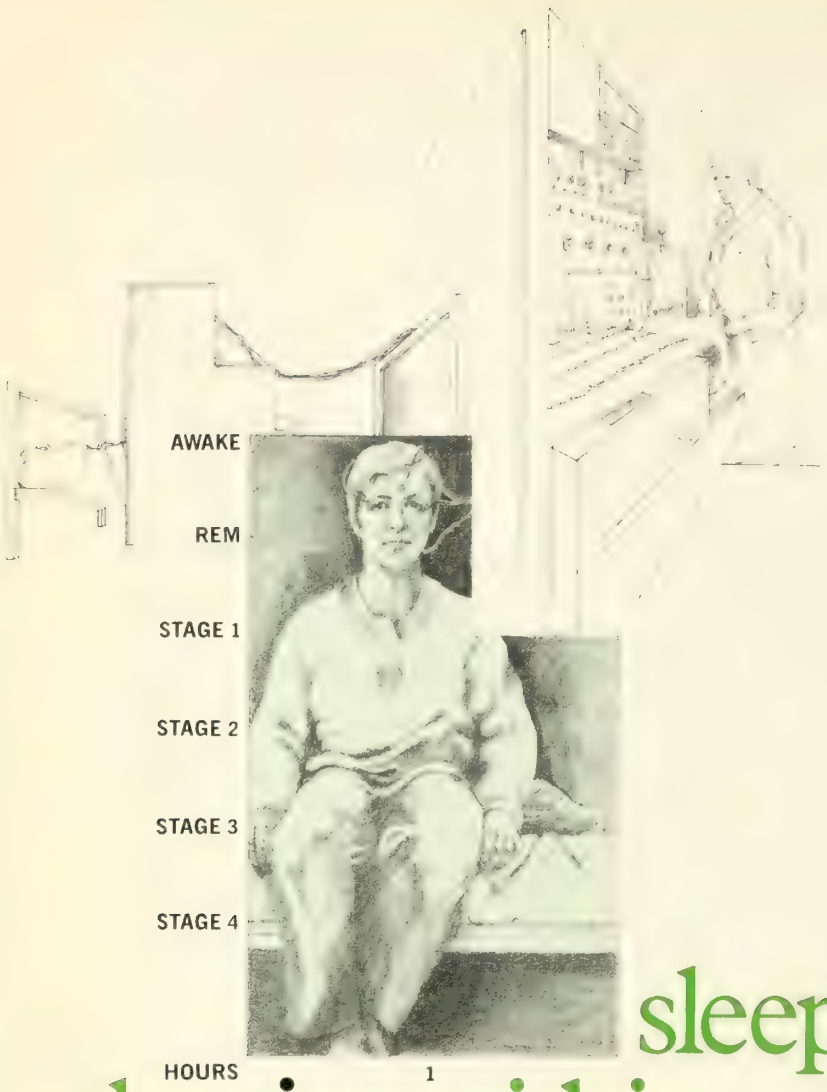
Lomotil usually stops diarrhea promptly. This rapid action halts the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate antibiotic therapy should be given along with Lomotil.

Lomotil has few side effects, and those that do occur are generally mild.

Lomotil®
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride ..... 2.5 mg.
(Warning: May be habit forming)
atropine sulfate ..... 0.025 mg.

Usually stops diarrhea promptly.



sleep begins within 17 minutes, on average ...

an initial benefit of

Dalmane®

(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]



confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

REFERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry* 23:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

KEEP THE HYPERTENSIVE PATIENT ON THERAPY KEEP THERAPY SIMPLE WITH DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Just 'Dyazide' once daily or twice daily
No inconvenient potassium supplements
Nor special K^+ rich diets needed as a rule



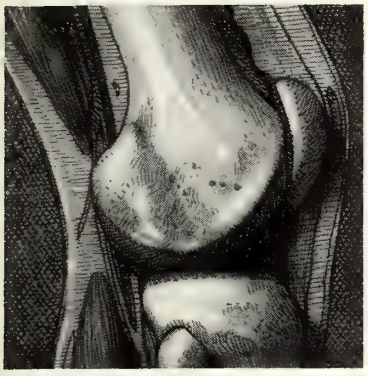
Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

SK&F CO.
Carolina, P.R. 00630
Subsidiary of
SmithKline Corporation

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP

WHEN FLU HITS AND HURTS

HERE Muscles and joints



Wherever it hurts, Empirin Compound with Codeine usually provides the symptomatic relief needed.

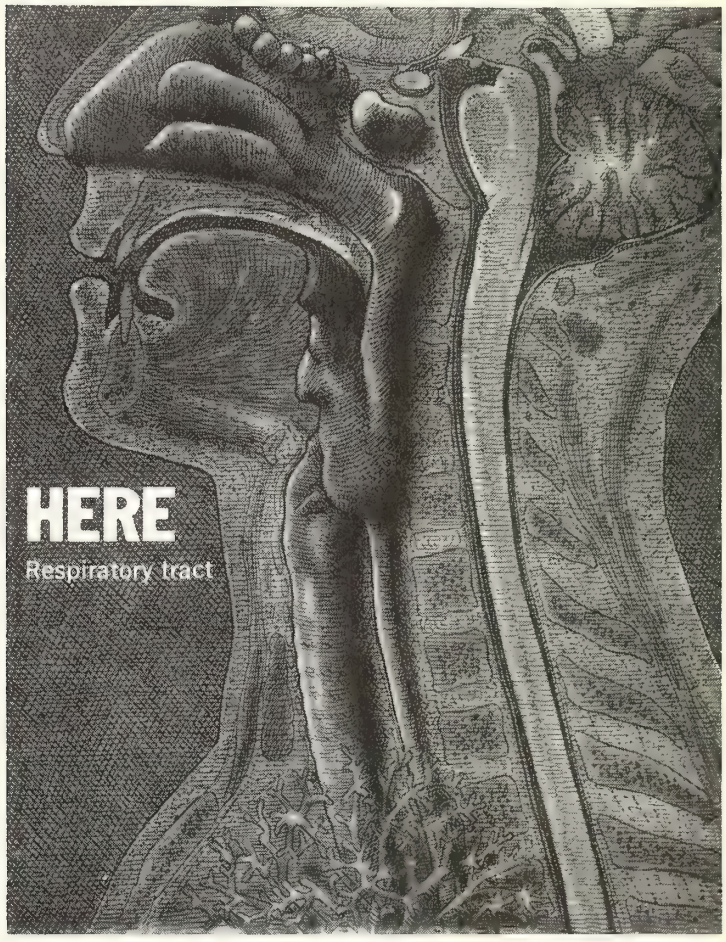
HERE Headache



In flu and associated respiratory infection, Empirin Compound with Codeine provides an antitussive bonus in addition to relief of pain and bodily discomfort.

℞ **prescribing convenience:** up to 5 refills in 6 months, at your discretion (unless restricted by state law); by telephone order in many states.

Empirin Compound with Codeine **No. 3,** codeine phosphate* 32.4 mg. (gr. ½); **No. 4,** codeine phosphate* 64.8 mg. (gr. 1) *Warning—may be habit-forming. Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.



EMPIRIN® COMPOUND c̄ CODEINE

#3, codeine phosphate* (32.4 mg.) gr. ½
#4, codeine phosphate* (64.8 mg.) gr. 1

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Research Triangle Park
North Carolina 27709

The Role of the Detail Man

Opinion & Dialogue

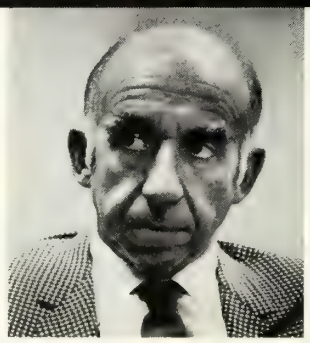


Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this country, there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

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P·M·A



Keeping things in balance...*

Antivert®/25 Tablets
(25 mg. meclizine HCl)

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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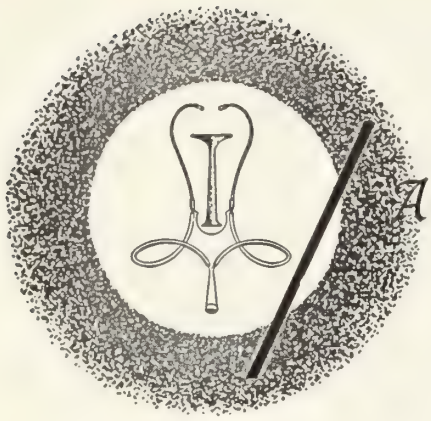
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Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the* Doctor's Calendar. *Notice of the session is posted in advance to allow the physician time to make preparations.

FEBRUARY

Feb. 21 — Kansas Regional Meeting, American College of Physicians, Downtown Ramada Inn, Topeka. INFO: John L. Morgan, M.D., 919 West 12th Avenue, Emporia 66801.

Feb. 21-22 — Pediatric Behavior Management, Miami. Write: Dept. of Pediatrics, University of Miami School of Medicine, PO Box 520875 Biscayne Annex, Miami 33152.

Feb. 24-28 — 4th Annual Thyroid Symposium, Vail, Colorado. Write: T. A. Verdon, M.D., Penrose Hospital, Colorado Springs, Colorado 80907.

Feb. 27-Mar. 1 — Central Surgical Association, Drake Hotel, Chicago. Write: A. J. Walt, M.D., 540 E. Canfield, Detroit 48201.

MARCH

Mar. 6-9 — Student American Medical Association, Palmer House, Chicago. Write: C. C. Hewitt, J.D., 1400 Hicks Rd., Rolling Meadows, Ill. 60008.

Mar. 14-15 — 27th Annual Midwest Cancer Conference, Century II, Wichita.

Mar. 14-16 — National Medicolegal Symposium, Grand Hotel, Las Vegas. Write: AMA General Counsel, 535 N. Dearborn, Chicago 60610.

Mar. 20-21 — National Conference on Rural Health, Hotel Roanoke, Roanoke, Va. Write: B. L. Bible, Ph.D., 535 N. Dearborn, Chicago 60610.

APRIL

Apr. 3-5 — *Recent Advances in the Immunoprophylaxis and Chemotherapy of Infectious Diseases,* ACP Postgraduate, Tucson. INFO: Registrar, Postgraduate Courses, 4200 Pine, Philadelphia 19104.

Apr. 11-12 — *Perspectives in Critical Care,* American Association for Inhalation Therapy regional seminar, Plaza Inn, Kansas City, Missouri. INFO: J. R. Lamb, 1500 West 10th, Topeka, Kansas 66606.

Apr. 16-19 — Missouri State Medical Association annual meeting, Chase-Park Plaza, St. Louis. Write: Ray McIntyre, 113 Madison St., Jefferson City 65101.

Apr. 17-20 — American Pediatric Society, Hilton, Denver. Write: C. D. Cook, M.D., Yale U. School of Medicine, New Haven, Conn. 06510.

Apr. 21-24 — 3rd Annual Spring Meeting, American College of Surgeons, Hyatt Regency, Atlanta. Write: ACS, 55 E. Erie, Chicago 60611.

Apr. 28-May 1 — Aerospace Medical Association, San Francisco Hilton, San Francisco. Write: M. H. Goodwin, M.D., Washington National Airport, Washington, D.C. 20001.

MAY

May 4-7 — Kansas Medical Society 116th Annual Session, Glenwood Manor, Overland Park.

University of Kansas Postgraduate Education:

Feb. 12-14 — *Diagnostic Cytology*
Feb. 26 — *The Mentally Handicapped Child*
Mar. 12-14 — *Pediatrics*
Mar. 24-26 — *Surgery*
Apr. 7-9 — *Ophthalmology*
Apr. 10-11 — *Emergency Nursing Care*
Apr. 16-17 — *Family Practice*
Apr. 18 — *Infectious Diseases*
Apr. 21-23 — *Anesthesiology*
May 8-9 — *Cardiovascular Diseases*

Also see page 14.

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Lennox Hill Hospital
New York, New York

J. TAYLOR WHARTON, M.D.
Associate Professor of Gynecology
The University of Texas System Cancer Center
M. D. Anderson Hospital and Tumor Institute
Houston, Texas

V. K. VAITKEVICIUS, M.D.
Professor and Chairman, Department of Oncology
Wayne State University School of Medicine
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Section of Colon and Rectal Surgery
Lahey Clinic
Boston, Massachusetts

RAYMOND KAUFMAN, M.D.
Professor and Chairman, Department of Obstetrics and Gynecology
Baylor University College of Medicine
Houston, Texas

FREDERICK F. PAUSTIAN, M.D.
Professor of Internal Medicine
Division Head, Digestive Diseases and Nutrition
University of Nebraska Medical Center
Omaha, Nebraska

UNIVERSITY OF KANSAS MEDICAL CENTER

POSTGRADUATE MEDICAL EDUCATION

Symposium:

SURGERY

March 24, 25 and 26, 1975

Guest Faculty:

GEORGE L. BLACKBURN, M.D., Ph.D., Harvard University School of Medicine, Boston, Massachusetts.

LAZAR J. GREENFIELD, M.D., Medical College of Virginia, Richmond.

THOMAS M. HOLDER, M.D, University of Missouri at Kansas City.

E. CARMACK HOLMES, M.D., University of California at Los Angeles School of Medicine.

ROBERT M. McCORMACK, M.D., University of Rochester School of Medicine and Dentistry, New York.

JOHN A. MANNICK, M.D., Boston University School of Medicine, Massachusetts.

EDWARD E. MASON, M.D., Ph.D., College of Medicine, University of Iowa, Iowa City.

FRANK G. MOODY, M.D., University of Utah Medical School, Salt Lake City.

RICHARD L. SIMMONS, M.D., University of Minnesota, Minneapolis.

HAROLD C. URSCHEL, Jr., M.D., University of Texas Health Science Center at Dallas and Baylor University Medical Center, Dallas, Texas.

ALEXANDER J. WALT, M.D., Wayne State University School of Medicine, Detroit, Michigan.

Subjects to be discussed will include:

SURGICAL PHYSIOLOGY AND NUTRITION; GASTRO-INTESTINAL SURGERY; TRAUMA; CANCER; and TRANSPLANTATION AND VASCULAR SURGERY.

Registration Fee: $105.00.

For program announcement and information, write: DEPARTMENT OF POSTGRADUATE MEDICAL EDUCATION, University of Kansas Medical Center, Kansas City, Kansas 66103.

UNIVERSITY OF KANSAS MEDICAL CENTER

POSTGRADUATE MEDICAL EDUCATION

Symposium:

PEDIATRICS

March 12, 13 and 14, 1975

Guest Faculty:

RAYMOND AMOURY, M.D., Children's Mercy Hospital, Kansas City, Missouri.

LOUIS GLUCK, M.D., Department of Pediatrics, University of California School of Medicine.

ROBERT T. HALL, M.D., Children's Mercy Hospital, Kansas City, Missouri.

Subjects to be discussed will include:

THE FETUS AS A PATIENT; THE NEONATAL TRANSITION; CARE OF THE ILL NEWBORN; MISCELLANEOUS NEWBORN PROBLEMS; and CLINICAL CASE PRESENTATIONS.

Registration Fee: $105.00

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Dosage and Administration: Children 3 to 6 years of age: One 2 gr suppository rectally 3 or 4 times daily; not to exceed 8 grains per day.

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Book REVIEWS

CARDIAC ARREST AND RESUSCITATION, 4th edition by Hugh E. Stephenson, Jr., M.D. The C. V. Mosby Co., St. Louis. 1974. 999 pages, 379 illustrations. $45.50.

This large and fairly expensive fourth edition with 379 illustrations and just short of a thousand pages has 28 contributing authors gathered from this country and abroad, whose main endeavors are in the fields of cardiology, surgery, anesthesiology, biomedical engineering, laboratories of experimental physiology, ophthalmology, and law. Physicians actually associated with mobile heart units are involved.

These authors authoritatively give currency of studies in the most important field of cardiac arrest and resuscitation. Noteworthy is the fact that over 90 percent of the sudden deaths in our country (those occurring within one hour of illness) result from cardiovascular disease. Furthermore, over half of those so afflicted die before an entrance into a hospital makes for an important focus on this issue of broad concern throughout the community, including the hospital. It is essentially a source-book written in depth and with understanding. Initially, its chief use would seem to be in coronary care and intensive care units of hospitals and areas where there is progressive instruction of nurses and lay personnel, who will be increasingly involved in the care of persons in the community, where these assistive people are corpsmen types, policemen, firemen, etc.

Important to the medical profession generally is a major part which discusses the "detection and avoidance of risk-factors in cardiac arrest." Hospitals and hospital committees setting up or revising acute care units—including pediatric units—could well use this volume. House officers would find the unit helpful as a reference, but probably would not want to buy this volume. Medical and nursing students likewise could profit from a number of sections, however the nursing student would find difficulty in many sections. The subspecialty cardiologists not in a university setting would find segments of considerable interest whether it be the results of animal physiologic studies made in Moscow, some of the legal considerations, or some of the more obstruse pharmacological considerations. The general internist would want to see this available in the hospital or other library. The format is easily readable and the paper is of good quality. The illustrations and tables are commendable.—*N.V.T.*

ALPHAGENICS, by Anthony A. Zaffuto, Ph.D. Doubleday & Co., New York. 1974. 220 pages. $6.95.

This is another "Do-It-Yourself" book. It is written so that a person can set up his own program for self-diagnosis and self-treatment of a variety of real and imagined physical or mental conditions. It is obviously intended for the popular literary market and written to lessen the importance of medical, surgical, or psychiatric care and eliminate dependence on recognized avenues of treatment and therapy.

The book's name *ALPHAGENICS* comes from the author's preoccupation with the knowledge that alpha brain waves are most prevalent during phases of relaxation. It is a well known fact that relaxation has many proven positive relationships to medical and psychiatric therapy in areas of anxiety, hypertension, etc. However, it should be in addition to, not instead of, competent medical, surgical, or psychiatric care.

The background of the author, as given in the brief biographical comments, is in sociology, counseling, and some research in the area of alpha brain waves. Doctor Zaffuto claims nothing new in his book except the induction method, which bears so many similarities to hypnotic induction that this reviewer questions whether it is new or unique.

Doctor Zaffuto advocates programming the mind during alpha phases with the idea that self-control, self-regulation of mind, body, and spirit can be learned by most people to free them from real and imaginary physical and mental illness as well as give fulfillment, purpose, and happiness to life. In spite of the author's familiarty with research, he makes no attempt to demonstrate or test his theory by recognized accountability

procedures or double blind studies. All claims are supported by self-rated forms and case studies that seem to be no more than a happiness index with no scientific merit.

The author has done an admirable job of putting together a vast amount of literature covering the Bible, the Eastern mystical philosophies, the parapsychological and the little understood third dimensional "bio-energy" of science fiction. The role of the trained physician is mentioned in three (3) sentences, each in a separate part of the book and then only for "serious" physical problems. In a book designed for self-diagnosis and self-treatment of so many conditions including but not limited to headache, pain, insomnia, asthma, obesity, sexual problems, phobias, alcohol and nicotine addictions, etc., it would behoove the author to write a few words on how the average individual can differentiate serious from non-serious in the above illness syndromes. Herein lies the real danger of this book, in our opinion. The author admits it frequently takes up to six weeks of twice daily programming to achieve first results. The magnitude of this delay in masking symptoms can all too often spell the difference between curative and palliative treatment in numerous medical, surgical and psychiatric diseases. Thus, we cannot recommend this book to the general public.—*M.E.T.*

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For Sale: Newly established medical practice 30 min. from downtown Wichita, Kansas. Township population 1300, gravitating area up to 3500. For more information, write: Medical Practice, 3521 E. Skinner, Wichita, Kansas 67218.

Family Practitioner needed for attractive rural community between Wichita and Hutchinson. Established practice with fully equipped clinic. Call collect: Mr. Paul Grier, Haven, Kansas 67543: 1-316-465-3639/3390.

The Journal accepts short classified advertising from the members of the Kansas Medical Society without a charge. These ads run in three consecutive issues of the Journal and are keyed with a correspondence number. All replies are forwarded immediately to the advertiser. Other brief classified ads are accepted from members of the medical profession only upon approval of the Editor or Editorial Board.

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Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BU 10259

adjunctive therapy for wound debridement

HELPS TO REMOVE:

- Necrotic Tissue and Associated Odor

HELPS PREPARE WOUND FOR:

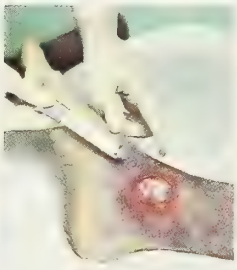
- Granulation/Healing
- Granulation/Grafting



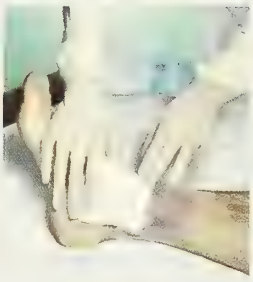
CLEANSE WOUND
Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials.



THOROUGHLY MOISTEN
Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g., sodium chloride or water solutions).



APPLY ENZYME
Apply a layer of TRAVASE Ointment. Assure intimate contact with necrotic tissue and complete wound coverage.



APPLY MOIST DRESSING
Apply loose moist dressings (most important with dry leathery eschar).



CHANGE DRESSINGS
When changing dressing, gently wipe away the dissolved material. Repeat the procedure, including application of TRAVASE Ointment, 3 to 4 times per day for best results.

Travase® Ointment
brand of Sutilains



Indications
For wound debridement (1,2)—TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:
Second and third degree burns,
Decubitus ulcers,
Incisional, traumatic, and pyogenic wounds,
Ulcers secondary to peripheral vascular disease.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Please see next page for prescribing information.

Travase® Ointment brand of Sutilains

ulcers

TERRY V. CARLE, M.D., CLINICAL INSTRUCTOR, DEPT. OF PHYS. MED. & REHAB., CRAIG REHABILITATION HOSPITAL, UNIVERSITY OF COLORADO



Before treatment, necrotic matter coated the inner surfaces of this decubitus ulcer.



After nine days of TRAVASE therapy, debridement is nearly complete and granulation evident.

burns

DALE B. DUBIN, M.D., DIPLOMATE, AMERICAN BOARD OF PLASTIC SURGERY, TAMPA, FLORIDA



Before treatment . . .



48 hours following treatment with TRAVASE Ointment on right hand; left hand is control.

Travase® Ointment

(brand of Sutilains)

Indications: For wound debridement, TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:

- Second and third degree burns,
- Decubitus ulcers,
- Incisional, traumatic, and pyogenic wounds,
- Ulcers secondary to peripheral vascular disease.

Contraindications: Application of TRAVASE Ointment is contraindicated in the following conditions:

- Wounds communicating with major body cavities,
- Wounds containing exposed major nerves or nervous tissue,
- Fungating neoplastic ulcers,
- Wounds in women of child-bearing potential—because of lack of laboratory evidence of effects of TRAVASE upon the developing fetus.

Warning: Do not permit TRAVASE Ointment to come into contact with the eyes. If contact is made, immediately rinse with copious amounts of water, preferably sterile.

Precautions: A moist environment is essential to optimal activity of the enzyme. Enzyme activity may also be impaired by certain agents (see package insert). Although there have been no reports of systemic allergic reaction in humans, studies have shown that there may be an antibody response in humans to absorbed enzyme material.

Adverse Reactions: Consist of mild, transient pain, paresthesias, bleeding and transient dermatitis. Pain usually can be controlled by administration of mild analgesics. Side effects severe enough to warrant discontinuation of therapy occasionally have occurred.

If bleeding or dermatitis occurs as a result of the application of TRAVASE Ointment, therapy should be discontinued. No systemic toxicity has been observed as a result of the topical application of TRAVASE Ointment.

DOSAGE AND ADMINISTRATION: STRICT ADHERENCE TO THE FOLLOWING IS REQUIRED FOR EFFECTIVE RESULTS OF TREATMENT:

1. Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials which may denature enzyme or alter substrate characteristics (e.g., hexachlorophene, silver nitrate, benzalkonium chloride, nitrofurazone, etc.).
2. Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g. sodium chloride or water solutions).
3. Apply TRAVASE Ointment in a thin layer assuring intimate contact with necrotic tissue and complete wound coverage extending ¼ to ½ inch beyond the area to be debrided.
4. Apply loose wet dressings.
5. Repeat entire procedure 3 to 4 times per day for best results.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC
Deerfield, Illinois 60015

KUMC Issue

THE Journal of the Kansas Medical Society

MARCH
1975

VOL. LXXVI
NO. III

Both often



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

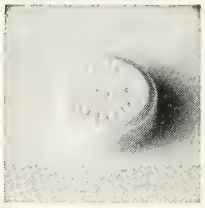
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequer and/or severity of grand mal seizures m require increased dosage of standard ar convulsant medication; abrupt withdraw may be associated with temporary in- crease in frequency and/or severity of seizures. Advise against simultaneous in gestion of alcohol and other CNS depres sants. Withdrawal symptoms (similar to those with barbiturates and alcohol) hav occurred following abrupt discontinuan (convulsions, tremor, abdominal and m cle cramps, vomiting and sweating). Ke addiction-prone individuals under caref

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

rveillance because of their predisposition to habituation and dependence. In egnancy, lactation or women of childaring age, weigh potential benefit ainst possible hazard.

ecautions: If combined with other psyotropics or anticonvulsants, consider refully pharmacology of agents emyed; drugs such as phenothiazines, rcotics, barbiturates, MAO inhibitors d other antidepressants may potentiate action. Usual precautions indicated in tients severely depressed, or with latent pression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

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Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Volume LXXVI, Number 3—March, 1975

The JOURNAL of the KANSAS MEDICAL SOCIETY

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ANNOUNCING

BURDICK-MUNNS MEDICAL SUPPLY CO.

ELECTROCARDIOGRAPH TECHNICAL TRAINING PROGRAM

TOPEKA, KANSAS	APRIL 4, 1975	8:00 A.M. To 5:00 P.M.
KANSAS CITY, MISSOURI	APRIL 11, 1975	
WICHITA, KANSAS	APRIL 4, 1975	
ST. LOUIS, MISSOURI	APRIL 4, 1975	

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Council Meeting

Report of Meeting Held January 19, 1975

A meeting of the Council was held at 10:00 A.M., on Sunday, January 19, 1975, at the Downtown Ramada Inn, Topeka. Dr. John N. Blank, President, called the meeting to order.

Present were the following voting members of the Council: Drs. Blank, Royal A. Barker, George E. Burket, Jr., Edward G. Campbell, Francis T. Collins, Clair C. Conard, Vernon W. Filley, Phillip A. Godwin, L. William Halling, Robert P. Hudson, Wendale E. McAllaster, Glenn Madsen, Warren E. Meyer, Gerald L. Mowry, Donald R. Pierce, Donald J. Smith, Thomas F. Taylor, Kermit G. Wedel, Evan R. Williams, and Emerson D. Yoder.

Also present were Drs. Cyril V. Black, Thomas P. Butcher, Clair J. Cavanaugh, Dean T. Collins, Richard M. Glover, H. Thomas Gray, Cline D. Hensley, Charles R. Jackson, H. Ivor Jones, Hugh S. Mathewson, Richard Meidinger, James N. Nelson, Lew W. Purinton, Lucien R. Pyle, Alex Scott, Gregg M. Snyder, Charles R. Svoboda, William C. Swisher, and Frederick P. Wolff. Also present were Messrs. Hank Parkinson, Gary Caruthers, James Agin, Jerry Slaugher, and Oliver E. Ebel.

Doctor Blank introduced Mr. Gary Caruthers, who will join the Society staff as Executive Assistant on February 1, 1975.

Mr. Chuck McKinsey, Kansas representative for Washington National Insurance Company, presented a report, and stated that his company cannot provide malpractice insurance.

Dr. Gregg Snyder, Chairman, Committee on Malpractice, presented the Council with a lengthy report on the work of his committee in connection with impending legislation.

Dr. H. Thomas Gray, Chairman, Committee on Legislation, discussed the efforts of that committee.

Dr. Edward G. Campbell, Treasurer, gave a financial report.

Dr. Donald Pierce, Councilor and member of the Editorial Board, reported on the financial status of THE JOURNAL, stating that the reserves had been exhausted, and the Editorial Board submitted five alternatives for funding the publication. After some discussion, it was moved and seconded that $10 be allowed from the membership dues as the annual subscription to THE JOURNAL; that ten scientific issues be printed in a calendar year; that the Program issue and the Roster issue also be printed but that these two issues be paid by the General Fund.

The Council voted to continue KMS membership in the Conference of State Presidents.

MEDIX, a television series produced by the Los Angeles County Medical Society, was discussed. The Council voted to approve the program, but the sponsorship of it was not endorsed.

Nominated to the Blue Cross Board of Trustees were Anol W. Beahm, M.D., Great Bend; J. Warren Jacks, M.D., Pratt; Edward F. Steichen, M.D., Lenora; and Stephen Knecht, M.D., Emporia.

The President appointed Dr. Clair C. Conard to study the problem of KaMPAC.

Dr. Lew W. Purinton, Chairman, Commission for Education, reported on the activities of the Committee on Postgraduate Education. The first survey to accredit a course in continuing medical education will take place at Halstead in mid-February. It was moved and seconded that budgetary requirements for the work of this project be established under the Commission for Education, and reported to the Council.

Dr. Francis T. Collins reported on the work of the Kansas Foundation for Medical Care.

There was discussion on miscellaneous topics, after which the meeting adjourned.

The patient with gastritis:

another type for TYLENOL® analgesic tablets



When the gastritis patient has a condition requiring an analgesic, a new problem arises. Aspirin's irritating effect on the gastric mucosa is well documented.[1-3]

TYLENOL analgesic tablets, on the other hand, are unlikely to cause local irritation,[2,3] which is why they are preferred in the patient subject to gastritis.

This is only one of several 'types for TYLENOL' analgesic tablets—that is, patients who should avoid aspirin. Considering *all* of them, wouldn't it provide added safety (as well as added convenience) to recommend TYLENOL tablets routinely for simple analgesia?

References: 1. Muir, A., and Cossar, I. A.: Brit. Med. J. *2*:7-12 (July 2) 1955. **2.** Vickers, F. N.: Gastroint. Endosc. *14*:94-99 (Nov.) 1967. **3.** Roth, J. L. A.: Med. Clin. North Amer. *41*:1517-1537 (Nov.) 1957.

Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. Acetaminophen has rarely been found to produce any side effects.

Supplied: Tablets, 325 mg.
For Children:
Elixir, 120 mg./5cc. (alcohol 7%).
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Safer than aspirin, yet just as effective for relief of pain and fever

TYLENOL®

acetaminophen tablets

McNEIL McNeil Laboratories, Inc., Fort Washington, Pa. 19034



Dear Doctor:

Last October, at the Auxiliary Fall Conference, the question was asked, "Why doesn't the Auxiliary help the rural doctors' wives contact and interest the wives of young doctors in the advantages of practice in a small town or rural area?" On January 23, our members from small towns and rural areas met with the WASAMA (Women's Auxiliary to the Student American Medical Association) of Wichita to discuss Operation—Helpmate. Dr. Bond Bible, AMA, provided materials and tapes from the Annual AMA Rural Health Conference of 1974.

One problem area is that the information provided the doctor and his family often comes from a chamber of commerce desperate to obtain a doctor for their area; a chamber of commerce which often paints a very rosy and glowing, but not always a true picture of the situation. Too often the doctor and his family are disappointed, leave the area, and do not again consider a rural practice. They may even, by their experience, discourage others from considering and exploring practice in these areas.

Another area that must be considered is the "trapped" feeling a doctor in a small community may feel, with no one to consult with or to relieve him for purposes of relaxation, to attend educational meetings, or to travel.

There is no doubt that the physician's wife can and should have a part in his decision on where he will practice his skills. The wives of our doctors in rural practice are the best source of an accurate, honest appraisal of the advantages and disadvantages of this type of medical practice. It is our duty to bring the two groups together in the best interests of good medical care for the people of Kansas.

The WASAMA members who participated added insight and depth to our meeting. They have been or will be involved in the Family Practice weekends of the Wichita hospitals. They also meet the other young doctors' wives regularly. This obviously provides an opportunity for discussion and exchange of information. It also provides us with a big chance to tell the story of rural practice where it will do the most good.

There is little doubt that your Auxiliary should be involved in this project. Those Auxiliary members in areas where there are residency training programs, family practice programs, internships, etc., can help by providing forums in which the wives of those doctors in training programs can frankly discuss the pros and cons of rural medical practice with wives of doctors in practice in rural areas.

The Women's Auxiliary hopes to present this plan at our convention in May, in Overland Park. Mrs. Richard Hill and Mrs. Jerry McNickle are inviting the wives of first- and second-year medical students, and Kansas WASAMA and RESITURNS members to be our guests at one of the Auxiliary's planned dinner meetings. This will provide the wife of any rural physician who wishes to participate the opportunity to talk about rural practice to those whose husbands are considering where to practice after training.

All county auxiliary presidents will be contacted about providing tickets for our guests. This is our first effort toward personal contact with the wives as a method of influencing the decisions of young doctors to enter family practice residencies and practice in rural Kansas. The rapid change in thinking and planning in the health care field in the areas of satellite health centers, physicians' assistants, and in other areas will probably make the picture of a rural type practice more attractive to our young doctors and their families.

There are so many good things about Kansas, both metropolitan and rural, that we should not be shy about praising and extolling them. The best thing about Kansas is our people. These efforts are basically to help Kansas people with their health problems.

Dot Meyer
President,
Woman's Auxiliary to the
Kansas Medical Society

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Follow the Yellow Brick Road

If Dorothy were to reappear in 1975, her journey to Oz would be much more difficult than it was in 1939.

In her original venture, the wicked witch was her most difficult obstacle. Today, she would have to file an environmental impact statement if she again chose a tornado as her means of transportation.

If Dorothy should happen to have "MD" behind her name, she would find herself confronted with a plethora of rules and regulations which would control many aspects of her practice of medicine.

Some of those bureaus, agencies, etc. which would exert some control, are:

Social Security Administration (SSA)
Social and Rehabilitation Services (SRS)
Public Health Service (PHS)
Health Services Administration (HSA)
Bureau of Quality Assurance (BQA)
Bureau of Health Insurance (BHI)
Professional Standards Review Organization (PSRO)
Comprehensive Health Planning (CHP)
Regional Medical Program (RMP)
Title XVIII Fiscal Intermediary
Title XIX Fiscal Agent
State Department of Health and Environment
etc., etc., etc., etc.

These are only some of the organizations who exert control over the practice of medicine, and most of those listed above have definite working interrelationships. In fact, many of the above may work on the same program, with varying degrees of influence.

If Dorothy asked what we (KFMC) were doing about PSRO, we would tell her that we have submitted a plan to BQA. We would tell her that we know the plan we submitted will work because it was designed by and for Kansas physicians. But, we would caution Dorothy that our yellow brick road leads to Washington, and the plan we submitted may undergo some changes before it is implemented in Kansas. How drastic those changes might be depends on the Wizards, Assistant Wizards, Deputy Wizards, *et al.* who will have the final say on our plan.

Yes, Dorothy, the yellow brick road has many pitfalls, and it is sometimes very difficult to stay on the path; but, the difficult we do with ease, it's the impossible that takes us a little longer.—*J.E.A.*

The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).



INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

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UNIVERSITY OF KANSAS MEDICAL CENTER

POSTGRADUATE MEDICAL EDUCATION

Symposium:

SURGERY

March 24, 25 and 26, 1975

Guest Faculty:

GEORGE L. BLACKBURN, M.D., Ph.D., Harvard University School of Medicine, Boston, Massachusetts.

LAZAR J. GREENFIELD, M.D., Medical College of Virginia, Richmond.

THOMAS M. HOLDER, M.D, University of Missouri at Kansas City.

E. CARMACK HOLMES, M.D., University of California at Los Angeles School of Medicine.

ROBERT M. McCORMACK, M.D., University of Rochester School of Medicine and Dentistry, New York.

JOHN A. MANNICK, M.D., Boston University School of Medicine, Massachusetts.

EDWARD E. MASON, M.D., Ph.D., College of Medicine, University of Iowa, Iowa City.

FRANK G. MOODY, M.D., University of Utah Medical School, Salt Lake City.

RICHARD L. SIMMONS, M.D., University of Minnesota, Minneapolis.

HAROLD C. URSCHEL, Jr., M.D., University of Texas Health Science Center at Dallas and Baylor University Medical Center, Dallas, Texas.

ALEXANDER J. WALT, M.D., Wayne State University School of Medicine, Detroit, Michigan.

Subjects to be discussed will include:

SURGICAL PHYSIOLOGY AND NUTRITION; GASTRO-INTESTINAL SURGERY; TRAUMA; CANCER; and TRANSPLANTATION AND VASCULAR SURGERY.

Registration Fee: $105.00.

For program announcement and information, write: DEPARTMENT OF POSTGRADUATE MEDICAL EDUCATION, University of Kansas Medical Center, 39th and Rainbow, Kansas City, Kansas 66103.

UNIVERSITY OF KANSAS MEDICAL CENTER

POSTGRADUATE MEDICAL EDUCATION

Symposium:

PEDIATRICS

March 12, 13 and 14, 1975

Guest Faculty:

RAYMOND AMOURY, M.D., Children's Mercy Hospital, Kansas City, Missouri.

LOUIS GLUCK, M.D., Department of Pediatrics, University of California School of Medicine.

ROBERT T. HALL, M.D., Children's Mercy Hospital, Kansas City, Missouri.

Subjects to be discussed will include:

THE FETUS AS A PATIENT; THE NEONATAL TRANSITION; CARE OF THE ILL NEWBORN; MISCELLANEOUS NEWBORN PROBLEMS; and CLINICAL CASE PRESENTATIONS.

Registration Fee: $105.00

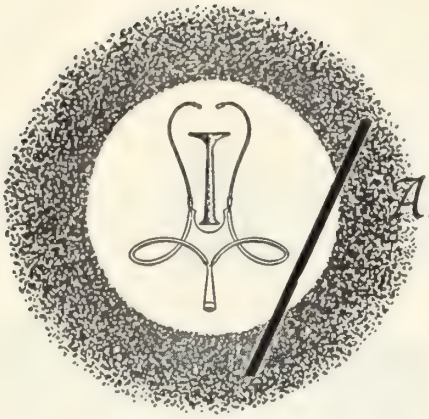
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Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the* Doctor's Calendar. *Notice of the session is posted in advance to allow the physician time to make preparations.

MARCH

Mar. 14-15 — 27th Annual Midwest Cancer Conference, Century II, Wichita.

Mar. 14-16 — National Medicolegal Symposium, Grand Hotel, Las Vegas. Write: AMA General Counsel, 535 N. Dearborn, Chicago 60610.

Mar. 20-21 — National Conference on Rural Health, Hotel Roanoke, Roanoke, Va. Write: B. L. Bible, Ph.D., 535 N. Dearborn, Chicago 60610.

APRIL

Apr. 3-5 — *Recent Advances in the Immunoprophylaxis and Chemotherapy of Infectious Diseases,* ACP Postgraduate, Tucson. INFO: Registrar, Postgraduate Courses, 4200 Pine, Philadelphia 19104.

Apr. 11-12 — *Perspectives in Critical Care,* American Association for Inhalation Therapy regional seminar, Plaza Inn, Kansas City, Missouri. INFO: J. R. Lamb, 1500 West 10th, Topeka, Kansas 66606.

Apr. 14-16 — American Academy of Pediatrics Annual Spring Session, Denver Hilton Hotel, Denver.

Apr. 16-19 — Missouri State Medical Association annual meeting, Chase-Park Plaza, St. Louis. Write: Ray McIntyre, 113 Madison St., Jefferson City 65101.

Apr. 17-20 — American Pediatric Society, Hilton, Denver. Write: C. D. Cook, M.D., Yale U. School of Medicine, New Haven, Conn. 06510.

Apr. 21-24 — 3rd Annual Spring Meeting, American College of Surgeons, Hyatt Regency, Atlanta. Write: ACS, 55 E. Erie, Chicago 60611.

Apr. 28-May 1 — Aerospace Medical Association, San Francisco Hilton, San Francisco. Write: M. H. Goodwin, M.D., Washington National Airport, Washington, D.C. 20001.

MAY

May 4-7 — **Kansas Medical Society 116th Annual Session, Glenwood Manor, Overland Park.**

University of Kansas Postgraduate Education:

Mar. 12-14 — *Pediatrics*
Mar. 24-26 — *Surgery*
Apr. 7-9 — *Ophthalmology*
Apr. 10-11 — *Emergency Nursing Care*
Apr. 16-17 — *Family Practice*
Apr. 18 — *Infectious Diseases*
Apr. 21-23 — *Anesthesiology*
May 8-9 — *Cardiovascular Diseases*


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27th annual MIDWEST CANCER CONFERENCE
march 14-15, 1975
century II
wichita, kansas



The Kansas Division of the American Cancer Society invites midwest physicians to attend a two-day graduate course on cancer, "Diagnosis and Management of Gastrointestinal and Gynecological Malignancies."

Guest Faculty:

HUGH R. K. BARBER, M.D.
Director, Department of Obstetrics and Gynecology
Lenox Hill Hospital
New York, New York

J. TAYLOR WHARTON, M.D.
Associate Professor of Gynecology
The University of Texas System Cancer Center
M. D. Anderson Hospital and Tumor Institute
Houston, Texas

V. K. VAITKEVICIUS, M.D.
Professor and Chairman, Department of Oncology
Wayne State University School of Medicine
Detroit, Michigan

MALCOLM C. VEIDENHEIMER, M.D.
Chairman, Department of General Surgery
Section of Colon and Rectal Surgery
Lahey Clinic
Boston, Massachusetts

RAYMOND KAUFMAN, M.D.
Professor and Chairman, Department of Obstetrics and Gynecology
Baylor University College of Medicine
Houston, Texas

FREDERICK F. PAUSTIAN, M.D.
Professor of Internal Medicine
Division Head, Digestive Diseases and Nutrition
University of Nebraska Medical Center
Omaha, Nebraska

Breast self-examination:

KEY ROLE OF THE PHYSICIAN

item:	**Breast cancer is a major concern of American women, according to a recent Gallup study conducted for the American Cancer Society.**
item:	**Although aware that early discovery improves the chances of cure, and that BSE can lead to early discovery, *fewer than 1 in 5* women practice BSE, and *only half* have an annual breast examination by a physician.**
item:	**Only 35% of all women polled reported that a *physician* had ever raised the subject of breast self-examination, and only 24% had received instruction from the physician on how to do it. Even among women who regularly see a gynecologist, only 34% had been instructed on BSE.**
item:	***But,* among women who received personal instruction from their physicians, the overwhelming majority *(92%)* practiced BSE during the preceding year.**

The Gallup study revealed that, far more important than increasing awareness of breast self-examination, is the problem of inducing women to practice it regularly. The physician plays a key role in this—by teaching women the correct technique, and instilling in them the confidence that will assure their continued practice of BSE.

The American Cancer Society gives major emphasis to breast cancer through research and a vast array of public educational materials, designed to give women life-saving information about the disease. Our latest approach is via a pioneering television film starring Jennifer O'Neill, "Breast Cancer: Where We Are." Where we *will* be in a few years will certainly hinge on our joint efforts.

American Cancer Society®

Kefzol®
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Ampoules, equivalent to 1 Gm. of cefazolin



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Twenty-Ninth Annual University of Kansas School of Medicine Issue

The Dean's Letter—1975

The University of Kansas Medical Center

WILLIAM O. RIEKE, M.D.,* ***Kansas City***

YOUR COLLEAGUES and associates at the University of Kansas Medical Center College of Health Sciences and Hospital join me in greeting you, our many friends and associates across Kansas. It certainly is a genuine pleasure for me to be able to write this, my fourth annual message, and report to you the continued excellent growth and development that has been experienced by our State's major provider of health educational, research, and patient care services. While the paragraphs that follow will detail the progress that has been made in those four areas which were identified in previous annual messages as being primary program goals for our Medical Center, it seems appropriate to use this introductory paragraph to present just a few of the data which summarize and underscore the dynamic manner in which your Medical Center is moving forward to meet its obligations. Specifically, during the last year (fiscal 1974) more students were enrolled in health professional training programs and more graduated than ever before—there were, in fact, approximately 250 new MDs produced in calendar 1974 alone! The number of full-time faculty at the Medical Center increased by 10 per cent, bringing the current total to 470. A new chairman in Physical and Rehabilitation Medicine, Dr. John Redford, and a new chairman in the department of Biochemistry, Dr. Kurt Ebner, were recruited. The total support from federal and private sources for research and education amounted to nearly $10 million, which was an increase of approximately 100 per cent over the previous year. There was a dramatic rise in the number of outpatient visits experienced, and the inpatient census of the hospital which reflects care given to residents from all over the state of Kansas remained at the same high level as in the previous year. It is both gratifying and important to note that expansions of the kind just mentioned markedly increased the capability of the Medical Center to serve in a wide variety of areas (even though they also augment and complicate the administrative woes that attend the management of an expanding complex institution).

*Executive Vice-Chancellor, The University of Kansas Medical Center, Kansas City, Kansas 66103.

In each of the last three years, a progress report has been given concerning the four primary program goals that the Medical Center has identified for itself. These are to: (1) Expand the size of our medical class; (2) Develop a clinical branch of the University of Kansas School of Medicine at Wichita State University; (3) Build new basic science and clinical buildings in Kansas City to meet increased educational and clinical service loads; and (4) Establish programs for training house staff as well as medical students in communities outside of Kansas City. It is time now to present this year's progress concerning each of these four areas, and it is appropriate to consider first the matter of student enrollment. Enrollment in all health professional programs at the University of Kansas Medical Center in the fall of 1974 has again exceeded the previous record enrollment of the fall of 1973. While in 1973 the total enrollment was 1,773 students in all programs, the 1974 fall enrollment was almost 1,900. Concerning enrollment of medical students, it will be recalled that there has been a progression in the size of the entering class with those matriculating numbering 125 in 1970; 144 in 1971; 154 in 1972; and 163 in each of 1973 and 1974. Our plans had been to accept 200 medical students in the summer of 1975, with the expectation that our new basic science teaching building would be available to handle the enlarged class. Unfortunately, the inevitable delays associated with a complex building program have been experienced and our basic science facility will not be completed in time for the 1975 class. Nevertheless, the University of Kansas Medical Center will honor its commitment to accept 200 students in the summer of 1975, and this large class will be enrolled. This will be done even though both students and faculty will experience significant problems with crowding for the first few months until the new building is available. The decision to accept 200 students in 1975 was motivated not only from a strong desire to keep our commitment, but also from the fact that the number of applicants for admission to Medical School has again increased and will surpass last year's record high. There were 1083 persons asking for admission to the University of Kansas School of Medicine in

the entering class of 1975. Among these were more than 450 residents of the state of Kansas, and as has been our practice in the past, acceptance was offered to more than enough Kansas residents to fill our class before any out of state acceptance was sent.

Relative to our goal of establishing and expanding the Wichita State University Branch of the University of Kansas School of Medicine, it is gratifying to be able to report that not only has the program been developed in exact accord with the time schedule set for it, but it has now been operational long enough to demonstrate that it is a sound endeavor which is being enthusiastically received by students, faculty, and the Wichita hospitals and medical community. The 15 students who were assigned to the Branch in January 1974, have been joined by 26 more in January 1975. A very important, indeed crucial, test for all of the University of Kansas School of Medicine including that component which is its Branch in Wichita came during the third week in October, when a site visit to both the Kansas City and Wichita campuses was made by a team representing the Liaison Committee on Medical Education of the American Medical Association and Association of American Medical Colleges. This team has responsibility for recommending whether or not the School of Medicine would continue its accredited status, and the team made it very explicit that in making its recommendation relative to accreditation there would be no separation of the component parts of the University of Kansas School of Medicine. Either the entire combined program in Kansas City and in Wichita would be accredited, or Kansas would have no accredited School of Medicine at all. The reader will therefore recognize the intense pleasure and relief that was experienced when at its exit interview the team announced that it would recommend full and continuing accreditation for the University of Kansas School of Medicine. While at this writing the final written report of the Committee is yet to be received, it seems not inappropriate to share this good news with you. The news is especially significant, I believe, because when the report is officially released Kansas will become only the second school in the nation to have a full and completely accredited program which includes offering for some of its medical students the entire clinical training at a location remote from the parent campus. I would be remiss if I did not take this opportunity to give public expression to the intense gratitude I feel toward the Kansas Medical Society, the members of the medical and hospital community in Wichita, and especially to Dean D. Cramer Reed and our faculty and staff for this outstanding accomplishment.

Turning now to the progress relative to the building program on the Kansas City campus, the news is mixed. While progress has been and continues to be made, it is much slower than had been hoped. On the bright side, a new research addition involving the addition of a sixth floor to Wahl Hall East and funded by nearly a million dollars of private contributions through the Kansas University Endowment Association, has now been completed. This research addition will provide invaluable space for the recruitment of new faculty who in turn will offer more educational capability and expanded and different health care services for all of Kansas. Progress with our basic science teaching building, which is so essential to our capability to educate increased numbers of medical as well as other health professional students, has been steady but discouragingly slow. The building originally targeted for completion in 1975 now appears scheduled for use in February 1976. As mentioned above, this will place a severe strain on our capability to educate the enlarged class of medical students which will be accepted in the summer of 1975, but emergent and special arrangements are being made to respond to this stress both in behalf of students and the faculty. The new clinical facility, which is the largest component of the entire building program (involving the addition of nearly 800,000 square feet gross) has been developing steadily. Blasting and excavation for this six-story structure, which will have four acres of floor space on each floor, is now completed. Bids for nearly $8.5 million of steel have been accepted, and work has begun on the footings and foundations for the structure. While there continues to be apprehension about the impact on this project of our nation's unprecedented inflationary economy, it is still anticipated that total costs will remain within the $50 million budget. Plans call for having all of the architectural work done for the entire project by the end of March 1975, and for having bids opened on the completed project in June of 1975. If all goes well, it is anticipated that the structure will be ready for occupancy by early 1978. As the demand for clinical care —both on an ambulatory and an inpatient basis—increases at the University of Kansas Medical Center, the need for this new facility, as well as for remodeling and updating existing older facilities, continues daily to become more urgent.

With the attainment of our first three primary program goals in sight, emphasis is steadily being shifted toward the fourth goal, which was the establishment of programs for training house staff and medical students in communities outside of Kansas City. It has long been recognized that one very effective way to retain health manpower for our state is to expose trainees to practice opportunities in Kansas at a time during

their lives when they are making the decision about where they will live. With this in mind, a pilot program for rotating at first surgical, and subsequently medical residents, for a portion of their training in Garden City was begun in the summer of 1972. That program has very clearly established its worth in terms of not only being a valuable educational endeavor, but also in being an effective tool for attracting physicians to remain in Kansas. The pilot program in Garden City has been progressively increased to include other cities. At the moment, there are medical, surgical, and pediatric house staff receiving their training in Topeka; there are family practice residents receiving training in Kingman and in Norton; and there are medical residents being trained in Halstead. These programs, which are not established unless they have a strong and bona fide educational base, have all been successful. Unfortunately, they suffer the defect of being too small in the sense that it has not been possible to rotate as many residents through them as would be desirable in terms of trying to retain significant numbers of physicians for practice in the state. Consequently, the Medical Center has begun active plans for three additional kinds of activities. The first of these is to identify as many more communities where outreach educational training programs could be established as is possible. The second, which comes in recognition of the growing need for primary care physicians, is to set the goal that 50 per cent of the total number of residents trained at the University of Kansas School of Medicine will be in primary health care areas. Specifically, this means in family practice, general medicine or in pediatrics, and all of these residents will receive some of their training in communities away from Kansas City. The third, somewhat longer range but perhaps more important activity, is the initiation of a special study group chaired by Dr. Jack Walker, to evaluate health care delivery systems and to make recommendations from a systems standpoint for organization of health care delivery in Kansas. It is recognized that recommendations from this study probably will not be capable of being implemented by the University of Kansas School of Medicine alone, but will require review, criticism, and eventual cooperative effort on the part of state government, the Kansas Medical Society, and many professional and private groups in Kansas. Nevertheless, it is believed that if a comprehensive study concerning health delivery patterns can be initiated at the same time that expansions in the outreach residency training programs are being undertaken, a global approach to the problem of meeting the physician shortage in Kansas can be made.

Before closing this year's letter, I emphasize again how very much the University of Kansas Medical Center wants to serve all of its various constituencies. Among them, you, our colleagues in the practice of medicine in the state, are certainly very important. In our attempts to assist you, we have during the course of the last year completed the implementation of the three recommendations which came from the Liaison Committee of the Kansas Medical Society and the University of Kansas Medical Center. The first of these was the development of brief discharge summaries which are mailed to you as soon after a patient of yours leaves the Medical Center as is possible. These summaries do not replace the usual detailed report which will follow at a later interval, but are designed to give you a more rapid review of the diagnosis, treatment, and recommendations made for your patients, so that you will be informed at the earliest possible moment. Secondly, we have installed a reverse or inward Wats line, #800-332-4199, which is available 24 hours a day, 7 days a week, to call the Medical Center toll free. It is gratifying to note that this line has enjoyed heavy use not only in the referral of patients but also in the transmission of information from the Medical Center to physicians and others in the health care fields across Kansas. Finally, and most recently, we have completed the directory of the University of Kansas Medical Center physicians by the specialties, and it has been distributed to you by the Kansas Medical Society. We hope the directory will be useful in making you aware of the kinds and depths of talent that are available to you either for informational purposes or for patient referral.

Although a great many more things could be reported to indicate the progress of your Medical Center, the most important thought with which to conclude is that we continue to need and value your support, understanding, and constructive criticism. Although much remains to be done to unite even more closely the medical profession in Kansas with the state's Medical Center, we feel closer in our cooperative efforts and programs than ever before. We thank you for this and wish you the very best. Please do send us your thoughts, comments and suggestions, and call on us when we may be of service.

Kindest regards!

Development of a Concept

Regional Gynecologic Cancer Service at KUMC

BYRON J. MASTERSON, M.D. ***and***
ROBERT P. CARTER, JR., M.D., ***Kansas City, Kansas***

The newly established Section of Gynecologic Oncology, in the Department of Gynecology and Obstetrics at KUMC, is described; its activities in patient care, teaching, and research are outlined; the relationship of the referring physicians involved with this service is reviewed and the need for improved, frequent communication is emphasized.

THE DEPARTMENT of Obstetrics and Gynecology at the University of Kansas Medical Center has always treated large numbers of patients with gynecologic malignancies. The expansion of clinical material and the increase in complex treatment programs produced the need for a section in gynecologic oncology, staffed with full-time physicians whose primary obligation is to this service.

The section of Gynecologic Oncology in the Department of Obstetrics and Gynecology was established with a full-time chief of service in 1974. The goal established for this section is to improve cancer care for women in the geographical area served by the Kansas University Medical Center. The organization of this service in indicated in *Table I.*

The correlation of the activities in this section of oncology with those of the other sections of Kansas University Medical Center who are concerned with oncology is facilitated through the Mid-America Cancer Center Program. As development of the comprehensive cancer center progresses, these areas will be coordinated more closely. The activities of the section of gynecologic oncology fall into three areas—those of patient care, education, and research.

Patient Care

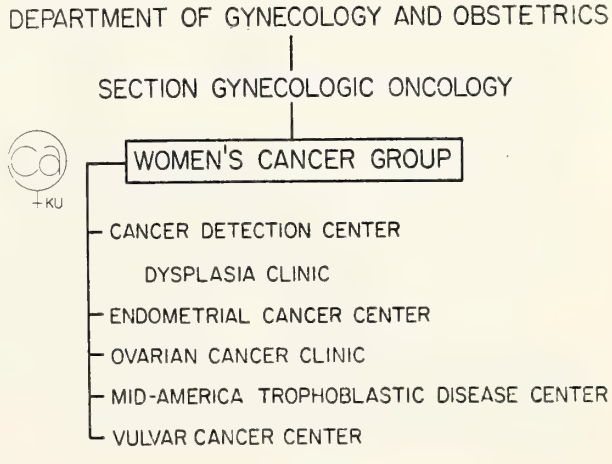
All new patients with gynecologic malignancies are seen in the Friday morning clinic by a member of the section. The fellow in gynecologic oncology also sees patients with the staff physician who evaluates and reviews findings. All correspondence with the referring physician is present, as are other findings such as x-rays and laboratory data. Microscopic slides are requested at the time the appointment is made, and the slides and supplementary report issued by the section of surgical pathology are correlated with other records. Our pretreatment workup is outlined by disease in *Table II.* Those studies prepared by the referring physician are, of course, not duplicated.

Address reprint requests to: B. J. Masterson, M.D., Regional Gyn. Cancer Service, KUMC, Kansas City, Kansas 66103.

The patient is evaluated and then presented to the multidisciplinary disposition conference, which is held at 11:00 AM each Monday, in Room 454 D. The referring physician as well as other interested physicians are encouraged to attend this conference. Invited attendants also include representatives of the section of radiation oncology, medical oncology, surgical oncology, and surgical pathology. The areas of social service, stomaltherapy, and volunteer service are also represented.

A plan of management is outlined and a letter is dispatched to the referring physician. If clarification or other information is needed, or the plan differs significantly from what was outlined in the phone call—

TABLE I



which usually precedes such referrals, the physician is contacted promptly.

TABLE II

Ca Vulva:

Complete history and physical including staging sheet.
Path report KUMC—review outside slides and x-rays.
Name and address of referring physician.
1% Toluidin blue stain with measurement of lesion and results recorded.
Chest x-ray, T and C 4 units, protime, partial thromboplastin time fibrinogen.
EKG.
IVP and cysto if lesion near urethra.
Pap smear—colposcopy cervix and endometrial biopsy.

Melanoma, Sarcoma:

Include scans, liver, bone, and nodes.

Paget's Disease:

Add scans, liver, bones, and nodes, cystoscopy, ba enema, mammogram.

Ca Vagina:

Complete history and physical.
Path report KUMC—review outside slides and x-rays.
Name and address of referring physician.
IVP—cysto to follow.
Ba enema—procto to follow.
Colposcopic exam recorded if any in situ vagina present.
Signed note indicating loss sexual function recognized by patient and husband if vaginectomy planned.
If to have surgery, bowel prep. pt., PTT, T and 4 units, fibrinogen.

Ca Cervix:

In situ—
Complete history and physical,
EKG and chest,
Colposcopic exam and directed biopsy report.
Invasive—
Complete history and physical exam and staging sheet,
Path report KUMC review outside slides and x-rays,
Name referring physician,
Chest x-ray and EKG,
IVP and cystoscopy,
Ba enema and protoscopy,
Prelaparotomy sonogram,
IIB III IV Pretreatment laparotomy.

Adeno Ca Endometrium:

History and physical and staging sheet.
Path report KUMC—review outside slides and x-rays.
Name and address of referring physician.
Chest, EKG.
Fractional D and C, Cervical biopsy.
Stage II, III, IV.
Scans, liver, and bones, sonogram.
Ba enema, procto.
Recurrent—Note: Protocol.

Ovary:

History and physical and staging sheet.
Path report KUMC—review outside slides and x-rays.
Name and address of referring physician.
Chest, EKG.
If Chemotherapy—
Chemotherapy sheet for chart,
Weight in KG,
Abdominal girth in cm.,
Last recorded dose drug,
CBC,
Platelets.
If Fixed Mass—
Procto Ba enema,
IVP, Cysto,
Sonogram.
If Surgery Planned—
Bowel prep., prothrombin time, fibrinogen, T and C 4 units,
Peritoneal washings for cytology,
Omental biopsy.
Recurrent—Note: Protocol.

Trophoblastic Disease:

If mole suspected—
Sonogram,
If positive, do hyapaque amniogram,
Draw radio immuno assay,
Chest x-ray,
If above, clearly diagnostic for molar pregnancy begin Actinomycin-D 0.5 IV x 5 days T anc C 3 units blood. Prepare infusion 40 units syntocinon and D and C on day 3,
1000 cc D/Lactate ringers,
Insert #16 IV Catheter,
Curette with large suction curette,
Notify trophoblastic disease center and begin followup sheet for recording RIA.

Chorio Ca:

History and physical and staging sheet.
Path report KUMC—review outside slides and x-rays.
Name and address of referring physician.
Complete detailed summary prior to drug therapy.
Results prior RIA plotted.
Chest, EKG.
Bone, liver scan, brain scan.
Liver function tests.

Chemotherapy patients are seen in the multidisciplinary area donated by the Masonic Foundation of Kansas. A nurse specially trained in administering chemotherapy is in attendance, as is a pharmacist for preparation of special drugs. Patients in the Mid-America Trophoblastic Disease Center group are followed at this time. Specialized gonadotropin testing as well as drug therapy is administered during this clinic.

Thursday is devoted to the investigation of patients referred with abnormal cytologic findings. The colposcope is of central importance in these investigations and will be the subject of a later publication in this journal.

Directed biopsy has greatly reduced the need for conization, and usually allows us to manage the entire investigation as an outpatient.

If treatment other than cryosurgery is needed, the patient may be referred back to her physician or operated on our service, depending on her physician's wishes.

The relationship of this service to the referring physician is of special interest to the senior author. As he was in private practice for nine years, he is acutely aware of the poor track record of institutions and their communication with referring physicians. The fact that a physician works in an institution does not relieve him of the basic professional ethics which govern all referrals. The entire patient referral mechanism in the section of gynecologic oncology has been established to avoid this problem. The liberal use of the direct phone contact and letters to physician as therapy progresses is emphasized. A toll free, direct dial line 1-800-332-4199, Ext. 6216, has been installed, and is available for both inquiry and telephone referral during regular office hours.

The threat of litigation is an increasing concern in medical practice. It is frequently brought on by careless or nonthinking comments. There are no careless comments on this service and the house officers and students are carefully advised on this point.

The rules of referral are emphasized to house officers as well. It is just as unethical for an institution to proceed with multiple procedures in other disease areas for which the patient was not referred, and for which similar and sometimes superior facilities and skills exist in the patient's home area, as it would be for any other specialist to delegate skills which the referring physician might better perform. We make every effort to maintain the patient's and her family's continued confidence in her original referring physician, and hope we may merit his support as well. The patient is, of course, returned to the care of her physician with followup limited to those areas of referral.

Teaching

The teaching functions of this section develop broadly into two areas: (1) The undergraduate teaching responsibilities pertain to those medical students who are assigned to our service and participate in rounds and conferences. A basic curriculum in oncology has been developed; (2) The graduate training program pertains to house officers at the intern, junior, and senior resident levels. The full time fellow in gynecologic oncology who is finishing the residency program with the University of Kansas will begin his fellowship July 1, 1975.

Postgraduate Education

Because of the subspecialized nature of the work which the gynecologic oncologist does, his involvement in postgraduate medicine is both time consuming and significant. The members of this section were scheduled to present 11 programs for postgraduate education during the academic year 1974 and 1975. These presentations were specifically prepared for postgraduate education and were in addition to other research presentations of narrower scope and less wide-spread interest.

Research

The section's current research efforts may be summarized as noted below:

Carcinoma of the Cervix:

1. Research program involving colposcopy and its coordination with cytology,
2. Outpatient management of abnormal cytologic findings,
3. Clinical management of DES offspring,
4. Pulse methotrexate therapy in recurrent carcinoma of the cervix,
5. Correlation Herpes II antibodies and carcinoma of the cervix.

Endometrium:

Combined chemotherapy, immunotherapy, and endo-

(Continued on page 63)

Emergency Medical Services in Kansas

Emergency Mobile Intensive Care Technician

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WE LIVE IN a conglomeration of states which compose the United States of America. The federal government tells us we must have emergency medical services, which we as a medical society and physicians within the state realize. Fortunately, however, the federal government does not tell us how we must achieve it. By the same token, a physician who is located in the eastern part of the state, at KUMC, and is interested in emergency medical care, cannot tell the medical societies in the western, eastern, central, rural, or urban portions of the state how this is to be achieved and how it fits each individual local community.

It is our responsibility to see that a mechanism for emergency medical training exists throughout this state, and that the facilities and material are available for such teaching. The federal government has provided for us the wherewithall to accomplish such a training program, in the form of a training grant from the Department of Health, Education, and Welfare. The State of Kansas, through the offices of Highway Safety Commission, began funding the program in 1973, and has continued partial support after awarding the DHEW grant.

Emergency Medical Services in the state can be divided into three broad categories:

1. Ambulance services which have little or no training, which are able to accomplish only the "grab 'um and run" technique (race to an accident site at high speed, grab the injured or sick patient, load him in the back of the ambulance, and run at high speed back to the hospital).

2. The second level is the Emergency Medical Technician/Ambulance. This individual has 81 hours of training, can accomplish stabilization in the field, can properly extricate, give cardiopulmonary resuscitation, splint, bandage, handle emergency childbirth, and deliver the patient to the hospital emergency room in no worse condition, and hopefully somewhat better condition, than when he picked the patient up.

3. The third level is that of the Emergency Mobile Intensive Care Technician (or, as many are familiar with the T.V. program "Emergency," the "paramedic"). Rather than a high-speed ride to the patient, then a high-speed ride back to the emergency room, this approach delivers the emergency room to the patient. The vehicle is not only fully equipped to handle all types of immediate care emergencies, but the technicians riding on it are capable of performing any task the physician directs them to do.

In Kansas, we now have training for the latter two approaches and technicians already functioning in the individual fields. This, then, is a report to the Kansas Medical Society of what has been accomplished by the School of Medicine since August 1973, and where we intend to proceed from here.

The programs were designed with two criteria in mind:

1. As much of the training as possible shall be done by the medical personnel in the local community.

2. All training accomplished shall be completed to national standards, so that Kansas could provide emergency medical services to its citizens equal to or better than they may find in any other state.

Emergency Medical Technician/Ambulance

The Department of Transportation contracted Dunlap and Associates to design a course which could provide greatest fund of knowledge to the ambulance attendants in the shortest period of time. A course of 71 hours, separated into 25 lesson periods was developed to cover all aspects of emergency medical care, from splinting and bandaging to cardiopulmonary resuscitation and emergency childbirth. There is the additional requirement of 10 hours of clinical experience, so that the EMT could develop the skills taught in class and, under medical supervision, relate them to patients. Unfortunately, so much material was put into this instructional time that more lecture—and particularly more clinical experience—is frequently necessary to train ambulance technicians.

Two things have become readily apparent:

1. The average physician in the state does not have the time necessary to devote to the entire instruction of such a course;

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2. Ambulance attendants cannot be asked to travel to a major teaching hospital three hours a week for six months in order to obtain this training.

Another important factor was that unless the Emergency Medical Technician Ambulance (EMTA) obtains this training in his local medical community, the physicians, nurses, and other medical staff would not be able to relate to him and continue his training each time he brought a patient in. Taking all these factors into consideration, it was decided that the instructor/coordinator approach would be the most satisfactory for Kansas. This approach entails training individuals in teaching techniques, with the audiovisuals available; instruction of EMT/A's; updating their medical knowledge and how to develop the practical experience of patient management. Applications were asked for and received from individuals throughout the state. Two such classes have been conducted: one in May 1974, and the second in October 1974. There have been 35 instructor/coordinators trained *(Figure 1)*. These instructors have now returned to their local communities and have conducted, or are planning to conduct, emergency medical technician courses. Their job is to identify and select a physician to coordinate the medical aspects of the training. Then they, along with their medical coordinator, recruit physicians, nurses, ambulance attendants, and other medical personnel to conduct the actual training sessions with the students. The instructor/coordinators will develop, with the local hospitals, clinical sessions so the ambulance attendant cannot only witness the things which he will be doing in the field, but can actually have on-hand experience.

After the training has been completed and the instructor/coordinator is satisfied with the progress of his students, testing for the national and state certification with registry can be accomplished by oral and written examination.

Crash Injury Management

As the Kansas Highway Patrol has always been a leader in the field of emergency medicine, its desire to update the training of all 365 Kansas troopers culminated in the designation of one of the troopers as instructor/coordinator to attend the KUMC course. A Crash Injury Management Course was developed along the national standards. Working in close association with the Kansas Highway Patrol, six instructor/coordinators spent two weeks at Kansas University Medical Center learning techniques and the specialized aspects of the Crash Injury Management Course. At the completion of the training period, the troopers began to train new rookies as they go through the rookie academy each year, and to develop updating and continuing education programs for all of the troopers. This course

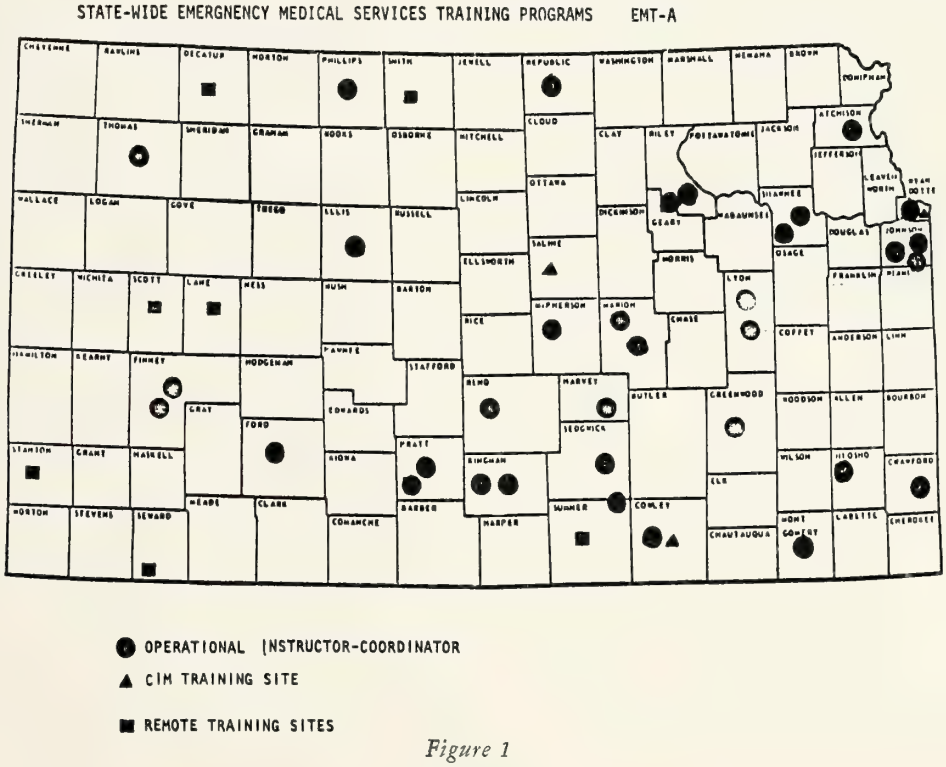


Figure 1

TABLE I

EMERGENCY MOBILE INTENSIVE CARE TRAINING PROGRAM
CURRICULUM OUTLINE

A. Introduction
B. Medical Terminology
C. Anatomy and Physiology
  1. Cellular
  2. Topographic
  3. Muscular Skeletal System
  4. Circulatory System
    a) Heart
    b) Blood vessels
      1) blood constituents
      2) coagulation
    c) Lymphatics
  5. Pulmonary System
  6. Nervous System
  7. Digestive System
  8. Endocrine System
  9. Renal System
  10. Reproductive System
  11. Special Senses
    a) Eye
    b) Ear
    c) Nose
D. Pharmacology
  1. Equivalents and conversions
  2. Dosage forms and administration
  3. Drug classifications
E. Introduction to Coronary Care
  1. Coronary Artery Disease
  2. Pump failure
  3. Myocardial Infarction
F. Electrocardiology
  1. Basis of the electrocardiogram
    a) cellular electrophysiology
    b) conduction system
  2. Genesis of the 12 Lead EKG
    a) Electrode application
    b) Significance in myocardial infarction
  3. Arrhythmias
    a) Sinus
    b) Supraventricular
    c) Conduction Disturbances
    d) Ventricular
  4. Defibrillation and Cardioversion
  5. Cardiovascular Drugs
  6. CPR
G. Medical Emergencies
  1. Diabetes
  2. Environmental Injuries
  3. Hypertensive Crisis
  4. Drowning
  5. Anaphylactic reactions
    a) allergies
    b) bites
    c) drugs
  6. Radiation injuries
  7. CVA
  8. Seizure Disorders
  9. Comas
  10. Infectious Diseases
  11. GI Bleeding
H. Trauma
  1. Thoracic
  2. Abdominal
  3. Orthopedic
  4. Head Injuries
  5. Wounds
  6. Shock
  7. Multiple Systems Injuries
  8. Injuries to Ears and Eyes
  9. Burns
  10. Triage
I. Pediatric Emergencies
J. Psychiatric Emergencies
  1. Drug Abuse
  2. Crisis Intervention
K. Technical Skills
  1. Intubation and Ventilation (endotracheal, esophogeal, bag and mask)
  2. Aseptic Technique
  3. Oxygen Equipment Usage
  4. History and Physical
  5. Vital Signs
  6. IV Technique
  7. Extrication
  8. Moving and Transporting
  9. Splinting
  10. Bandages
  11. Radio Communications
  12. Driving Skills

closely follows the outline of the Department of Transportation 81-hour EMT course, but with modifications which are specifically suited to the trooper working in the field, who frequently arrives on the scene 15-20 minutes before any other help is available.

Emergency Mobile Intensive Care Technician

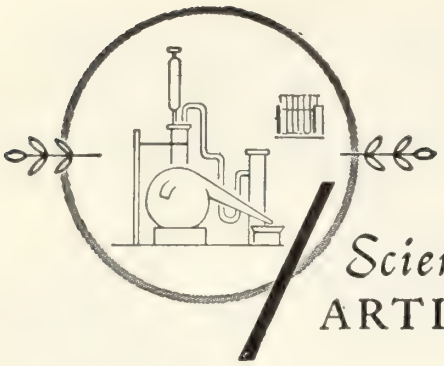
As described above, the thrust of this program is to deliver the emergency room to the patient. This will enable the physician to directly discuss with the technician the medical problems existing, and treat the patient through the technician. In essence, this makes the technician the eyes, ears, and the hands of the physician. In order to accomplish the task, the Emergency Mobile Intensive Care Technician has to be well trained in physical examinations, recognition of the signs and symptoms of diseases, have a working knowledge of electrocardiography, know and understand the pharmacology of the drugs which he carries in his drug box, and have a functioning knowledge of anatomy and physiology. He must be able to recognize emergency medical and surgical conditions from their presenting signs and symptoms, develop a working diagnosis of the problem and communicate all of this in medical terminology to the physician. He then must be able to carry out the physician's orders for intravenous solutions and medications, establish an airway utilizing oral, esophageal or endotracheal techniques, to understand the dosage, indication and contraindication of the medication which the physician would direct him to use. As one can readily recognize, the knowledge required of an EMIC technician is approaching that of a Registered Nurse working in an emergency situation. To accomplish these tasks and to obtain this level of knowledge, an adequate amount of instruction must be given to the individual.

Instructional programs based on programs developed by the Department of Transportation, Los Angeles County Fire Department, University of Washington for the Seattle Fire Department, and other similar courses in the country have been developed. The curriculum is shown in *Table I*. Noting the extent of the training, it is easy to recognize that such a training program must be conducted where an adequate patient load, teaching facilities, and personnel are available. It is hoped that a modular approach can be developed with the junior college system in the state, so that some of the courses (anatomy, physiology, pharmacology, etc.) could be taught in the students' home area. This would alleviate some of the need of the student to travel to one of the larger teaching hospitals in the state to obtain his training.

At the present time, two approaches to this training are being accomplished. The first is a course of instruction taught at the medical school in Kansas City, for individuals who are presently in the employ of city governments and desire the training. Fifteen employees of the Kansas City Fire Department were trained to this level, beginning in January 1974, and certified in September 1974. Additional 8 individuals from Kansas City, Kansas Fire Department; 13 individuals from Topeka; and 17 from Johnson County are undergoing this training at Kansas University Medical Center. The second approach is a collegiate course through the junior college system. Individuals will enter into the academic system of their local junior college in Kansas. For one year, they will obtain educational courses in business administration, accounting, personnel management, English, and other courses designated by the state junior college system. They will attend the Medical School for a period of two semesters and one summer, obtaining the necessary instruction in Emergency Mobile Intensive Care. They will then have 42 hours of credit. After two years of instruction, one at the Medical School and one at their junior college, they will have obtained an Associate of Arts Degree in Emergency Medical Services. The first class began January 1975, at the Kansas University Medical Center.

Conclusion

The Kansas University School of Medicine has responded to direction by the state legislature in the 1973 and 1974 sessions by setting up training programs in pre-hospital emergency medicine, both on the 81-hour level and the Emergency Mobile Intensive Care level (EMT/A and EMIC level). The training programs are being conducted in such a manner that the local medical community has supervision over the program and can develop continuing education programs to assure continued quality.



Scientific ARTICLES

Heart Surgery

Advances in Cardiac Surgery

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PIONEERING ENDEAVORS in the various medical fields are one of the functions of a medical center. This paper reviews some of the recent developments in the field of cardiac surgery and their application at the University of Kansas Medical Center.

Preoperative Evaluation

Cardiac Catheterization

The mainstays of preoperative patient analysis are still history, physical examination, roentgenographic and electrocardiographic studies, and cardiac catheterization. Cardiac catheterization is essential in patients with most forms of congenital heart disease and in patients with coronary artery disease. All patients with valvular heart disease do not require cardiac catheterization, but information helpful in the management of the patient is usually obtained from such a study and, in patients over 40 years of age, coronary angiography is advisable in most adults. Accordingly, cardiac catheterization with coronary angiography is performed in most adults.

Non-invasive Techniques

Although some non-invasive techniques are still developmental, others have become quite useful clinically. These techniques are: phonocardiography with analysis of systolic time intervals, echocardiography as an aid to specific diagnosis in a variety of diseases, and vectorcardiography. Continuing comparison of these non-invasive techniques with the findings at cardiac catheterization and operation may enable us in some instances to rely upon them without cardiac catheterization in the future.

The details of cardiac surgical care at KUMC are reviewed briefly. Recent philosophical, technical, and organizational advances in the preoperative, operative, and postoperative aspects of this area of surgery are emphasized.

Operative Techniques

Cardiopulmonary Bypass

Cardiopulmonary bypass with a roller pump and bubble oxygenator has been the standard for many years. Although membrane oxygenators are now available, their primary advantage of minimizing blood trauma is thwarted by the trauma induced by presently available cardiotomy suction devices.

Site of Arterial Perfusion

Techniques for cannulating the ascending aorta have become quite safe and have allowed the avoidance of many of the problems previously associated with femoral artery cannulation. The ascending aorta is, therefore, cannulated for arterial inflow in most patients.

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Hemodilution

There is an increasing tendency to employ total hemodilution during cardiopulmonary bypass. Many patients have undergone cardiac surgery without receiving any blood during their entire hospitalization. Hemodilution offers rheologic advantages in terms of uniform distribution of blood flow to the tissues and more uniform cooling and warming of the patient during bypass. In addition, hemodilution allows blood conservation and lowers the risk of hepatitis.

Profound Cardiac Hypothermia

Although generalized total body hypothermia has been employed in various forms since the inception of cardiac surgery, recent years have seen an increasing trend to supplement total body cooling with profound cardiac hypothermia during open intra-cardiac procedures. Since the blood supply of the heart is large compared to other organs and body tissues, it is possible to profoundly cool the heart while not lowering total body temperature excessively. This is accomplished by adjusting the waterbath in the heat exchanger of the heart-lung machine to 15C for several minutes and by irrigating the pericardium with 4C saline. The degree of myocardial cooling accomplished by these maneuvers will allow up to 30 minutes of safe ischemic cardioplegia.

Steroids

Recent studies in our research laboratory have indicated that steroids have a salutory effect on ventricular compliance. Decreased ventricular compliance occurs following open heart procedures as a result of myocardial edema. This decrease may be critical in patients with left ventricular hypertrophy. In this group of patients and in patients in whom prolonged ischemic cardioplegia is anticipated, Solu-Medrol (70 mg/kg) is added to the prime during cardiopulmonary bypass.

Atrial Pressures

Measurement of left atrial pressure facilitates discontinuation of cardiopulmonary bypass by providing definition of left ventricular preload and guiding adjustment of blood volume. When the right ventricle is likely to be the locus of myocardial dysfunction, the central venous pressure is a guide to preload in that chamber and should also be measured. Left atrial pressure monitoring is also helpful in preventing left ventricular distention and pulmonary venous hypertension during bypass.

Postoperative Management

The care of the postoperative cardiac surgery patient is unique because the high degree of monitoring employed permits immediate application of basic circulatory physiology to clinical problems. The electrocardiogram, left and right atrial pressures, arterial pressure, chest drainage, urine flow, and body temperature are continuously monitored. In selected patients pulmonary artery, right ventricular and left ventricular pressures are also monitored.

The electrocardiogram permits analysis of heart rate and detection of arrhythmias. Bradyarrhythmias may be an indication for cardiac pacing. To this end, pacemaking wires are sutured to the atrial epicardium in the operating room. If episodes of complete heart block or slow atrial fibrillation seems likely in the postoperative period, a pacemaking wire is also sutured to the right ventricular epicardium. Rate augmentation can be used to enhance cardiac output or to suppress ectopic atrial or ventricular activity. When possible, we prefer atrial pacing in order to preserve the atrial contribution to ventricular filling. Atrial pacing wires can also be used diagnostically to obtain atrial electrograms to decipher the nature of supraventricular tachycardias. Both standard electrocardiographic monitoring and, in particular, atrial electrograms are obtained by telemetry in order to minimize electrical hazards. Pacing wires are carefully insulated to obviate the concern of a low resistance pathway for conduction of small electrical currents to the myocardium.

The drug treatment of arrhythmias is fairly standardized. If the hemodynamic situation permits, and if maintenance of sinus rhythm is not likely, atrial fibrillation and paroxysmal auricular tachycardia are treated with Digoxin or Inderal. Quinidine sulfate is sometimes employed to maintain normal sinus rhythm or to suppress ectopic atrial foci. Premature ventricular contractions are treated with intravenous Lidocaine. If chronic treatment is required, Pronestyl is administered. Dilantin is preferred in the management of premature ventricular contractions which are thought to be related to digitalis administration.

Atrial pressures provide indices of myocardial performance. A fall in atrial pressure which occurs due to hypovolemia may precede a fall in arterial pressure by a considerable time interval. Similarly, elevations of atrial pressure above 15 mmHg are an early index of ventricular dysfunction, provided overtransfusion and atrio-ventricular valvular obstruction are not present. Thus, despite the presence of an acceptable blood pressure, one can be aware that myocardial performance is suboptimal or that hypovolemia exists. In general, then, atrial pressures are a guide to the ability of the ventricles to handle the blood volume which they are receiving at a given time. Low cardiac output states are managed by optimizing filling pressure, minimizing myocardial demands, particularly reducing excessive

elevation of systemic blood pressure, and administering catecholamines acutely and Digoxin chronically when other measures fail. Cardiac ouptut is the ideal parameter to monitor in assessing cardiac performance. Currently, thermodilution appears to offer the simplest method of frequent determination of cardiac output.

Chest drainage is carefully measured as an index of postoperative bleeding. One must, of course, be aware that blood can accumulate in the mediastinum and cause cardiac tamponade, even if the pericardium has been widely opened at operation. Excessive drainage warrants consideration for mediastinal exploration and laboratory assessment for and appropriate treatment of coagulopathy.

The patients are mechanically ventilated via an endotracheal tube for 24 hours in most cases. Some patients are candidates for early extubation and others require prolonged ventilation to diminish work of breathing when their cardiac output is suboptimal. Ventilator adjustments are guided by periodic arterial gas analyses. The comparison of peak inspiratory airway pressure and the patient's tidal volume provides information regarding pulmonary compliance. If an adequate arterial PO_2 cannot be obtained with high inspired oxygen concentrations, positive end expiratory pressure may be necessary. Diuretics are sometimes employed to diminish lung water. Chest x-ray is employed to exclude mediastinal widening, hemopneumothorax, and major atelectasis. In addition, gastric dilatation and position of endotracheal tubes and central venous pressure lines can be ascertained. The decision to extubate a patient is made after careful evaluation of the arterial gas analysis, chest x-ray, peak inspiratory pressure, amount of secretions as indicated by quantity and frequency of airway suctioning, cardiac output, amount of chest drainage, and the patient's level of consciousness. While the patient is intubated, gastric decompression is provided by a nasogastric tube to avoid gastric dilatation.

Low urine flow (less than 20 ml/hour) is managed by insuring that the urinary catheter is patent, optimizing cardiac output, and administration of a diuretic, usually Lasix.

Every effort is made to render the patient normothermic. Both elevation of the body temperature and the shivering which is associated with hypothermia cause increased metabolic demands on the myocardium.

We have found standard patient management protocols quite useful in insuring consistent care. Such protocols are available for the management of low cardiac output, cardiac arrhythmias, pulmonary dysfunction, low urine flow, maintenance fluid administration, indication for re-operation, and the general indications for time of chest tube and atrial line removal, duration of administration of antibiotics, administration of Coumadin, timing of ambulation, and type of diet. Attending physician, resident, surgical assistant, nurses, and other members of the cardiac surgical group are guided by a standard approach to patient management. Deviation from these protocols must be approved by the attending physician. Should a deviation become necessary, the protocol is reviewed to see why it did not cover the particular problem.

Congenital Heart Disease

An increasing number of congenital heart disease centers are adopting the philosophy of total correction of congenital heart anomalies in children during the first two years of life. Palliative operations such as subclavian to pulmonary artery shunt, atrial septectomy, and superior vena cava to pulmonary artery shunt are being employed less frequently. During the past two years, 16 patients less than two years old have undergone total correction of congenital heart anomalies at the University of Kansas Medical Center. There were only two deaths, both in patients with uncorrectable defects. The anomalies which were corrected include tetralogy of Fallot, aortic stenosis, ventricular septal defect, transposition of the great arteries, and aorto-pulmonary window. When one considers the socio-economic aspects of palliative operation followed later by total correction, and the fact that the combined mortality for the two procedures is probably at least as high as that for total correction in infancy, one can appreciate the reason for the more recent trend toward the latter approach.

The development of composite conduits containing heterograft valves now permits total correction of previously uncorrectable forms of congenital heart disease with right ventricular-pulmonary artery discontinuity (pulmonary atresia, truncus arteriosus, severe tetralogy of Fallot, and some forms of malposition of the great arteries).

Valvular Heart Disease

Between July 1970 and October 1974, porcine heterograft prostheses, preserved in stabilized gluteraldehyde and mounted on flexible stents, were implanted in 168 patients at the University of Kansas Medical Center with eight deaths (5%). The first 103 patients have been studied in detail. Forty of the 103 patients underwent multiple valve replacement or valve replacement and concomitant aorto-coronary bypass. Of these,

there were four operative and six late deaths. Ninety-one per cent of all the patients are alive with normally functioning prostheses. Hemodynamic and angiographic studies in 46 patients at six months and one year postoperatively demonstrated an average gradient of 2.5 mm across mitral valve prostheses at rest, and a gradient of 5.4 mm across mitral valve prostheses during exercise. Ventriculograms in 44 patients disclosed no mitral valvular regurgitation except in an infant with prosthetic dysfunction resulting from bacterial endocarditis. One prosthesis was examined six months following operation and showed no histologic changes. The use of this prosthesis allows avoidance of anticoagulants postoperatively, unless the patient has atrial fibrillation associated with low cardiac output or when intra-cardiac clot was present at operation. In the entire group, there were two emboli: one at four days and one at three months. The excellent hydraulic function, low operative and late mortality, relative freedom from emboli without anticoagulation, and absence of prosthetic dysfunction for up to 51 months, prompt us to continue the use of this prosthesis. At present, the Reis-Hancock porcine heterograft valve is the prosthesis of our choice for aortic, mitral, and tricuspid valve replacement.

Ischemic Heart Disease

Aorto-coronary Bypass

In a consecutive unselected series of 151 patients undergoing aorto-coronary saphenous vein bypass (ACB) for coronary artery disease (CAD), seven patients died at operation or in the immediate postoperative period, and six patients died subsequently (2 to 20 months after operation) of CAD and related complications.

Of the seven operative deaths, all patients had severe multiple vessel coronary obstruction, all had moderate or severe abnormalities of left ventricular contraction (LVC), and all had low cardiac index (CI) (less than 2.6 L/min/m^2). Patency of coronary vessels distal to obstruction was ideal for grafting in only three of the seven patients.

Of the six patients who died later, five had severe, three-vessel CAD; five had abnormal LVC before operation; and three had low CI. The single patient with normal LVC and two-vessel obstruction incurred an acute anteroseptal myocardial infarction (MI) just before operation.

Among 53 patients with normal preoperative LVC, there were no operative or late deaths except for the single patient who was operated upon immediately following an acute MI. Mean followup interval was 18.5 months.

Patients can be classified into two groups based upon the preoperative evaluation: Group 1—Patients with normal or near-normal LV function as assessed by ventriculogram and CI, and coronary vessels characterized by focal obstruction with adequate distal runoff. Elective operation in this group has been accompanied by no operative or late deaths; operative treatment can therefore be recommended to these patients with negligible risk and expectation of salutary postoperative benefits; Group 2—Patients with moderate or severe impairment of LV function, as assessed by ventriculogram, CI (CI 2.6 L/min/m^2) and coronary vessels characterized by widespread disease. Higher, but acceptable, operative mortality (7%) and less satisfactory but gratifying long-term results (5% late mortality) are to be anticipated. Patients in this high risk group, manifesting symptoms of angina pectoris, should not be denied operation.

Complications of Myocardial Infarction

The complications of myocardial infarction which require surgical management are: (1) shock secondary to loss of 40 per cent of left ventricular muscle mass; (2) complete heart block; (3) delayed myocardial dehiscence (mural rupture, ventricular septal rupture, papillary muscle rupture); and (4) ventricular aneurysm. The indications for operation are relatively clear when these complications occur.

Aortic Balloon Counter-pulsation

The mortality rate for patients who develop cardiogenic shock following a myocardial infarction is 90 per cent. Some degree of salvage has been obtained in this group of patients by employing the technique of intra-aortic balloon counter-pulsation. This technique takes advantage of the fact that coronary blood flow is maximal during diastole and that myocardial oxygen consumption can be lowered by diminishing ventricular afterload. A balloon is passed into the upper descending thoracic aorta and synchronized with the electrocardiogram, so that it deflates as the ventricle ejects and inflates during diastole. Aortic systolic pressure is lowered, diminishing cardiac work, and aortic diastolic pressure is elevated increasing coronary blood flow. With this technique, cardiac output improves, and organ perfusion is enhanced both by the improved cardiac output related to increased coronary blood flow and the proximal and distal displacement of blood in the aorta by inflation of the balloon. It is not necessary to heparinize the patient while this device is being employed, and it can be continued for several weeks if necessary. Salvage of patients with severe myocardial infarction with this technique *alone* has not been great;

its primary utility would appear to be in obtaining a satisfactory hemodynamic state while the patient undergoes coronary angiography preparative to aorto-coronary bypass to preserve myocardium in the zones of injury and ischemia which surround the area of frank myocardial infarction. This technique also finds utility in patients who cannot be separated from cardiopulmonary bypass following an open heart procedure. The time limitations on cardiopulmonary bypass, because of ongoing blood destruction and the need for heparinization, are several hours. With the implementation of balloon counter-pulsation, this mode of hemodynamic support can permit separation from total cardiopulmonary bypass and the patient can be taken to the intensive care unit where several days or weeks can be utilized to withdraw balloon support.

Infundibular Hypertrophic Subaortic Stenosis (IHSS)

This heart disease has been studied intensively at the University of Kansas Medical Center for the last three years. It is a form of ventricular outflow obstruction which usually appears in adult life, tends to occur in families, and has a congenital origin. Left ventriculoseptomyectomy provides excellent relief of the obstruction. Many patients with this disease also have mitral regurgitation. This, as well as the obstruction, relate to malposition of the papillary muscles. The ventriculoseptomyectomy allows the papillary muscles to shift into a more normal position allowing proper closure of the mitral valve and preventing its impingement upon the left ventricular outflow tract. Mitral valve replacement has been suggested and performed by others for the treatment of this malformation. Although this procedure also relieves ventricular outflow obstruction and mitral regurgitation, the same objectives can be accomplished by the ventriculoseptomyectomy without the need for a prosthetic valve. Between October 1971 and November 1974, ventriculoseptomyectomy was performed in 22 patients at the University of Kansas Medical Center with no operative deaths, and marked clinical and hemodynamic benefits in all.

Simultaneous Correction of Coronary and Peripheral Vascular Disease

Patients with severe coronary artery disease and a large or symptomatic abdominal aortic aneurysm or carotid atherosclerosis with transient ischemic attacks present special problems. A sequential surgical approach poses a therapeutic dilemma. Recently, we have adopted the approach of simultaneous correction of these cardiovascular problems. Carotid endarterectomy can be performed at the same time as aorto-coronary bypass and, in fact, the operation can be accomplished while the patient is on bypass to take advantage of controlled hypothermia as well as anti-coagulation and the ability to control cerebral perfusion pressure. Similarly, abdominal aortic aneurysmectomy can be performed immediately following aorto-coronary bypass. This procedure is performed by many surgeons with the patient anti-coagulated, so the state of hypocoagulability which follows cardiopulmonary bypass is not a contraindication to this approach. With current techniques in anesthetic management and cardiac and pulmonary support, duration of operation is not as great a problem as it has been in the past. Based on this philosophy, three patients have undergone simultaneous correction of coexistent, life-threatening coronary occlusive and peripheral vascular disease at the University of Kansas Medical Center. To date, there have been no operative deaths and all patients continue to do well.

Lesions of the Upper Descending Thoracic Aorta

Traumatic laceration of the upper descending thoracic aorta and coarctation of the thoracic aorta involve consideration of the blood supply to the spinal cord while the lesion is being resected and aortic reconstruction is being effected. Patients with coarctation who have poorly developed collateral vessels, and patients with traumatic lacerations of the aorta who have no collateral vessels, will require either cardiopulmonary bypass with perfusion of the femoral artery to insure spinal cord flow or some type of shunt. Recently, tygon shunts with special cannulae have been employed to shunt blood from the ascending aorta to the descending aorta during these types of operations. We have employed this technique in coarctation of the aorta with poorly developed collaterals. The advantages of this technique are that cardiopulmonary bypass is not necessary, anti-coagulation is not required, and the difficult cannulation of the femoral vessels in a patient with coarctation of the aorta and in the lateral decubitus position is avoided. This technique is not applicable to patients with dissecting aneurysms of the descending thoracic aorta and does not permit the flexibility in traumatic aortic rupture that cardiopulmonary bypass provides. Between November 1971 and October 1974, we have operated upon four patients with traumatic rupture of the thoracic aorta utilizing cardiopulmonary bypass. All survived operation, but one patient succumbed one month later due to complications of multiple abdominal injuries.

Dissecting Aneurysms of the Thoracic Aorta

The initial management of patients with these lesions is medical. Hypotensive agents are employed to diminish myocardial contractility and to decrease the pulsatile nature of aortic flow with its shearing forces with dissection beginning in the upper descending thoracic aorta. Operation is undertaken when the patient does not respond to medical management (as indicated by continuing pain indicating progression of the dissection), or when certain complications of dissection (intrapleural or mediastinal bleeding, or occlusion of a major artery) occur. In patients with dissections beginning in the upper descending thoracic aorta who are otherwise healthy, and in patients with ascending aortic dissections, we prefer immediate operation rather than medical management.

Cardiac Pacemakers

Bradyarrhythmias constitute a significant medical problem which occurs for the most part in geriatric patients. Transvenous pacemaker insertion can be accomplished under local anesthesia in most patients. Thus, a general anesthetic is avoided in these patients who frequently have many other medical problems such as vascular disease, diabetes mellitus, and chronic lung disease. The major advances in the area of pacemakers involves the development of powerpack units which have a longer life span, and the development of special techniques for detecting powerpack failure rather than arbitrarily replacing the units at a specified time. Pacemaker patients at the University of Kansas Medical Center are followed closely and constitute an important sub-group of patients who essentially receive care in a specialty-clinic-type of environment. One hundred forty patients underwent cardiac pacemaker implantation at the University of Kansas Medical Center from January 1971 through July 1974, and are currently in followup. This group includes 104 patients with demand pacemakers and 36 with fixed rate pacemakers. The mode of pacing was bipolar in 76 cases and unipolar in 64 cases. Pacing was via epicardial electrodes in 46 instances and endocardial (transvenous) electrodes in 94 instances. During the time period covered, insertion of 62 transvenous endocardial electrodes and associated powerpacks was accomplished in the cardiac catheterization laboratory. The 78 powerpack replacements were performed in the operating room. Although bradyarrhythmias of the complete heart block type constitute the major indication for operation, patients with congenital heart block and patients who require atrial pacing are included in the above group and demonstrate the need for flexibility and individualization in patient management. Recently, we have successfully challenged the surgical dictum that a foreign body must be removed when infection occurs. Silastic is an extremely inert material. When the unfortunate complication of pacemaker powerpack wound infection occurs, we have managed several patients by excising the bursa around the powerpack, obtaining hemostasis, inserting a hemovac, and employing intravenous antibiotics to effect wound healing and, thereby, avoid the necessity of removing the pacemaker and replacing it.

Structure of the Cardiac Surgical Service

Cardiac surgical procedures are performed with a minimum of personnel in the operating room. A cast of many is no longer required. Most procedures involve an anesthesiologist, a pump technician, a scrub nurse, the surgeon, and one or two assistants.

In order to tailor training of physicians to manpower needs, one cardiothoracic surgical resident completes a two-year training period each year. Surgical assistants are of tremendous help in organizing the day-to-day care of these patients. The cardio-thoracic surgery group at the University of Kansas has utilized the first surgical assistant at this institution and is quite pleased with this approach.

Proper patient care requires that a core of intensive care and ward nurses devoted to and trained for the care of cardiac surgical patients be available. The role of standard patient management protocols has already been discussed. As we progress to computerized, automated patient monitoring, further improvement in patient care is anticipated.

Development of a Concept

(Continued from page 53)

crine therapy in recurrent adenocarcinoma of the endometrium.

Ovarian Carcinoma:

Combined protocol participant with chemotherapy and immunotherapy.

Trophoblastic Disease:

The Mid-America Trophoblastic Disease Center research program includes prophylactic actinomycin-D in molar disease and multi-drug therapy in choriocarcinoma.

In January 1975, we became an institutional member of the Gynecologic Oncology Group. This national cooperative study group makes available 21 additional research protocols for our patients.

Fasting HGH in Diabetes

Regulation of Ambulatory Diabetics

ROBERT E. BOLINGER, M.D. ***and***

JOSEPH L. KYNER, M.D., ***Kansas City, Kansas***

THE BEHAVIOR of plasma growth hormone (HGH) in relation to changes in glycemia has been amply characterized[1, 2] in the physiologic state. Several deviations from expected normal responses have been noted in diabetics, however. Although the average plasma growth hormone levels in untreated juvenile diabetics are not significantly different from those of normal subjects,[3, 4] the levels may be inappropriately high in the face of the elevated blood glucose of the diabetic.[5–9] Sabeh[10] and co-workers noted lower HGH levels in non-insulin treated diabetics, and elevated levels in the insulin treated group.[11] Non-diabetic relatives of diabetic patients were shown to have increased HGH responses to arginine[12] and glucose,[13] and Tzagournis *et al.*[14] noted elevated HGH levels in lipoatrophic diabetes.

Hansen and co-workers[15–17] and Lundbaek[18] observed that HGH response to exercise was higher in the diabetic before insulin treatment than it was when insulin was given. In contrast, in ketoacidosis the HGH levels increased only after insulin was administered and then in the face of high blood glucose levels.[19] Greater fluctuation throughout the day, as well as increased mean values of HGH, were observed by Hansen and Johansen[17] and by Molnar *et al.*[20] in treated juvenile diabetes.

Detailed studies of HGH levels in diabetics have been reported by Molnar and colleagues[8, 9, 20] using continuous plasma sampling. They noted higher levels in the unstable diabetics during fasting and exercise. Hypoglycemic reactions evoked by insulin infusion usually caused increases in HGH levels which were not different from the response seen in non-diabetics at blood glucose levels below 35 mg/100 ml. However, there were a significant number of HGH responses to insulin infusion at higher blood glucose levels in the diabetic group only.[8]

The prevalence of nocturnal hypoglycemic episodes in patients treated with long-acting insulin has been pointed out by Somogyi.[21] Firm evidence to support the occurrence of these is often lacking because of the rebound hyperglycemia found at the usual time of blood glucose monitoring before breakfast. The nocturnal reactions may be typical but are often evidenced by less specific symptoms, such as morning headaches or night sweats, or may be asymptomatic.

This paper purports to present the significance of the fasting HGH level in ambulatory diabetic patients, and it will be shown that even in the face of greater variability expected in the outpatient population, the findings are generally concordant with those cited above for hospitalized patients.

Methods

Ambulatory patients followed in the Diabetic Clinic of the Kansas University Medical Center were studied. They presented themselves to the clinic in the fasting state. Blood for HGH and glucose was drawn and the prior 24-hour glycosuria determined from a measured aliquot of a 24-hour urine collection. The plasma growth hormone was determined by a modification[22] of the dextran-coated charcoal method of Herbert *et al.*[23] Blood glucose was determined by the autoanalyzer method.[24, 25] The capacity of the patient's plasma endogenous antibody to bind insulin was estimated by incubating labeled insulin with the patient's serum in the absence of added insulin antibody. The bound and free fractions were then separated by dextran-coated charcoal,[23] and the fractional binding was determined in the gamma well counter. The fractional binding of the patient's serum was compared with the same from a normal non-diabetic, non-insulin treated serum pool, and the insulin binding index was expressed as a percent of the normal binding as follows: Insulin Binding Index = Binding of subject serum/Binding of normal serum.

The subjects were grouped as follows:

Group 1—Unstable diabetics (49 subjects). These were insulin-dependent, non-obese diabetics who described at least 5 insulin reactions per year, all of whom were on treatment with intermediate acting insulin

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alone or in combination with regular insulin. Common insulin and dietary regulatory problems have been excluded as causes for the reactions.

Group 2—Stable diabetics (32 subjects, 95 visits). These were insulin-dependent, non-obese diabetics with less than 5 insulin reactions per year. Only 4 of this group described more than one insulin reaction in the current year.

Group 3—Insulin independent diabetics (120 subjects, 120 visits).

Group 4—Normal non-diabetics (37 subjects). These subjects were non-obese (110% or less of ideal body weight) with a negative family history for diabetes.

Twenty insulin-dependent diabetic patients were studied while in the Clinical Research Center after obtaining informed consent, under conditions of controlled diet and regular activity. Blood samples for growth hormone and glucose were drawn from these patients at midnight, 3:00 AM and 7:00 AM.

Results

The mean values for the fasting plasma human growth hormone shown in *Table I* indicate no significant age dependent differences. Thus, the mean values pooled for all ages indicate a significantly ($P < .01$) higher fasting HGH for the unstable diabetics (5.7 ± 0.7 ng/ml) than for any of the other groups.

The time pattern of symptomatic insulin reactions occurring within the 24-hour period preceding the growth hormone determination reveals significantly higher HGH levels *(Figure 1)* in those subjects with insulin reactions than those showing no hypoglycemic symptoms during that period. Furthermore, the highest HGH levels are noted in the Group 1 subjects reporting reactions between midnight and morning. Interestingly enough, even in the unstable subjects (Group 1) not reporting reactions in the preceding 24 hours, the levels of fasting HGH are significantly higher than those in the stable diabetic (Group 2) or non-diabetics (Group 4). By using fasting HGH of 2 ng/ml as a limit which is significantly above the mean for the sta-

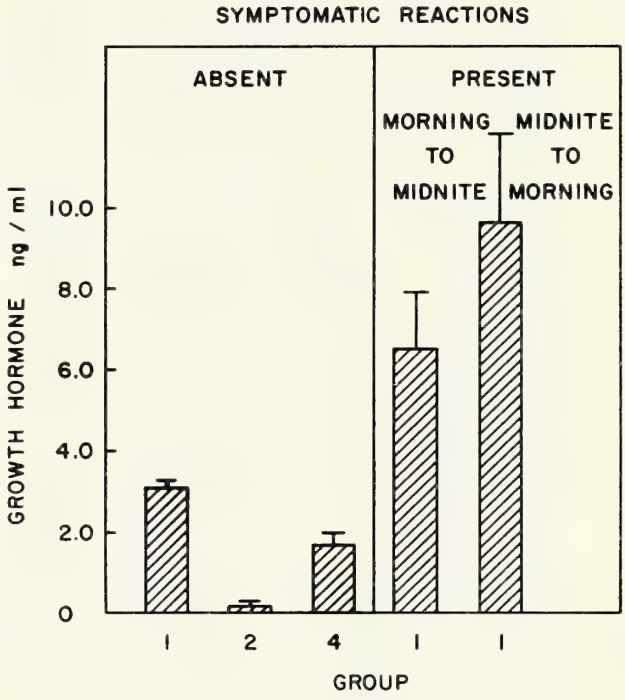


Figure 1. Fasting ambulatory growth hormone in subjects either reporting or not reporting symptomatic insulin reactions in the previous 24-hour period is shown as the mean and standard error by groups.

TABLE I

FASTING PLASMA GROWTH HORMONE ng/ml

	Insulin Dependent Diabetics		*Insulin Independent Diabetics*		
	UNSTABLE GROUP 1	STABLE GROUP 2	NEVER ON INSULIN GROUP 3A	PREVIOUS INSULIN GROUP 3B	*Non-Diabetic* GROUP 4
Age Under 40 yrs.					
Mean	5.74	0.36	1.09	1.53	1.85
S.E.*	0.27	0.01	0.02	0.52	0.21
N†	57	30	24	10	12
Over 39 yrs.					
Mean	5.72	0.38	1.08	1.51	1.83
S.E.*	.86	0.04	0.02	0.51	0.20
N†	127	65	72	14	25

* S.E. = $\sqrt{\Sigma x^2/N(N-1)}$

† N refers to number of visits tested.

ble insulin-dependent diabetics (Group 2), a significantly higher incidence of insulin reactions in the 24-hour period prior to the visit is associated with elevations of HGH above this limit *(Table II)*. More specifically, a preponderance of these reactions occurs in the period between midnight and morning *(Table III)*.

Growth hormone levels in hospitalized diabetics had been found to be higher in females than in males.[17, 20] However, in the ambulatory group studied here, the differences are not clear-cut probably due to the greater variability of the data in the ambulatory situation.

To study any relationship between the magnitude of variation of the prescribed insulin dose and HGH, the change in total insulin dose and fasting HGH from one visit to the next were compared. Although scatter of data points in *Figure 2* is wide, in the unstable diabetics (Group 1) a weak but significant correlation ($r = .334$, $< .01$) exists between change in insulin dose and change in HGH. An analysis of the frequency distribution *(Table IV)* further supports a partial dependence of changes in HGH on changes in insulin dosage (Chi square = 26.85, $P < .001$).

The root mean square of the change in HGH for the insulin variable visits is 8.25 ng/ml in the unstable diabetics and for the insulin constant visits is 5.03 ng/ml *(Figure 3)*. A comparison with the same parameter for the stable group reveals much less variability.

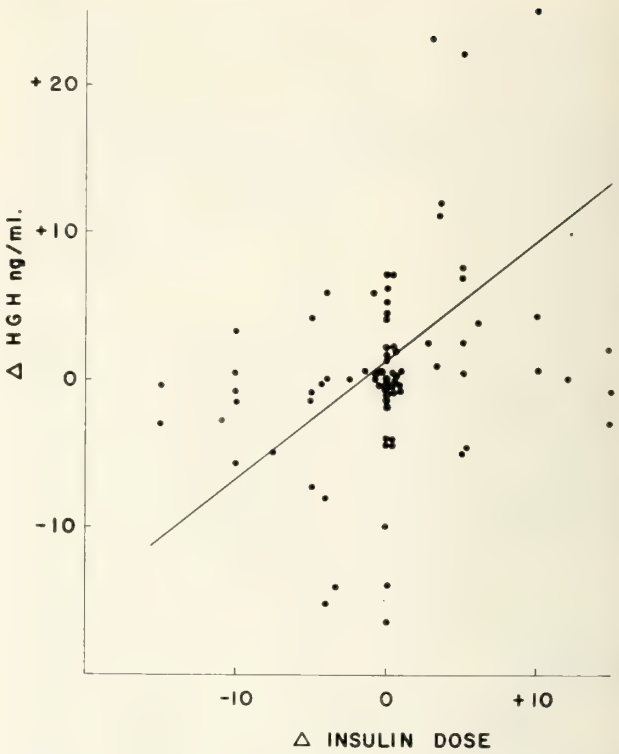


Figure 2. The regression curve of change in fasting growth hormone versus change in insulin unit dosage since the last visit ($r = .334$, $P < .01$).

The relation of the blood glucose at 3:00 AM and at 7:00 AM is shown in *Figure 4* for the 20 hospitalized subjects without nocturnal symptoms of hypoglycemia who were briefly awakened at 3:00 AM for the blood sampling and returned to the sleeping state without food intake. Unexpectedly, 10 of the 20 samples showed a nocturnal blood glucose in the range of 25 to 50 mg/100 ml. By 7:00 AM, all but one of these pa-

TABLE II

COMPARISON OF INSULIN REACTIONS IN PRIOR 24 HOURS IN HIGH AND LOW HGH GROUPS

	Fasting HGH	
	GREATER THAN 2 NG/ML	LESS THAN 2 NG/ML
Without reactions prior 24 hours	36 (18%)	69 (35%)
With reactions prior 24 hours	57 (29%)	36 (18%)

Chi square = 12.35, $P < .001$.

TABLE III

INSULIN REACTIONS BEFORE AND AFTER MIDNIGHT IN HIGH AND LOW HGH GROUP

	Fasting HGH	
	GREATER THAN 2 NG/ML	LESS THAN 2 NG/ML
Reaction before midnight	41 (44%)	34 (36%)
Reaction after midnight	16 (17%)	2 (3%)

Chi square = 6.89, $P < .01$.

TABLE IV

INCIDENCE OF CHANGE IN HGH (OF GREATER THAN 1 NG/ML) TO CHANGE IN INSULIN DOSE BETWEEN VISITS IN INSULIN DEPENDENT DIABETICS

	HGH		
	Increased	*Decreased*	*No Change*
Insulin dose			
Increased	16	4	1
Decreased	5	12	2
No change	11	17	16

Chi square = 26.85, $P < .001$.

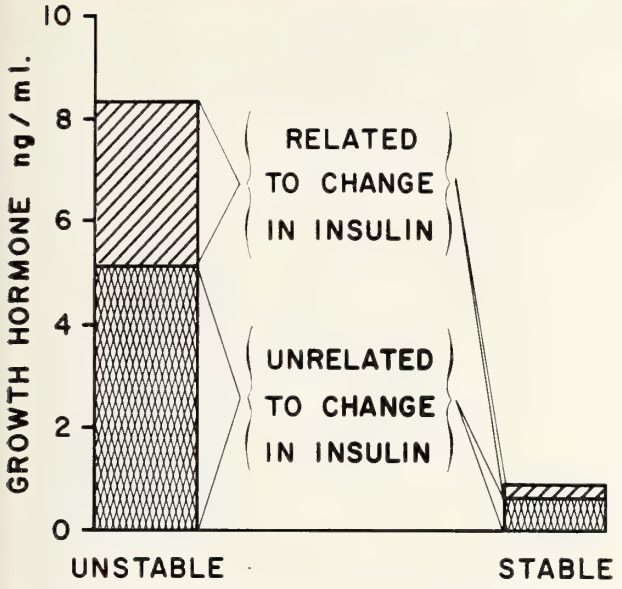


Figure 3. The root mean square of the variation in fasting growth hormone from visit to visit is shown for the unstable and stable diabetic groups.

tients had a variably high glucose well out of the hypoglycemic range.

The incidence of diabetic retinopathy in the insulin-taking diabetics as determined by fundiscopic examination after mydriatic is shown in *Table V*. In those subjects with diabetes of over 10 years' duration, the incidence of retinopathy is significantly higher in the unstable diabetic group (Chi square = 6.88, $P < .01$) than in stable insulin-dependent group. The average insulin requirement ($33 \pm 3U$) was the same in the stable and unstable diabetics.

Binding of labeled insulin to plasma has been demonstrated to occur only in the gamma globulin fraction and results from antibody formation to exogenous insulin.[26] The plasma insulin binding index shown in *Figure 5* is expressed as the ratio of binding of labeled insulin in the plasma of the subject to that of a normal control plasma. The binding is significantly higher in the unstable than in the stable diabetic group. This is essentially in agreement with the findings of Palumbo *et al.*,[27] where the presence of high levels of circulating insulin binding antibodies could account for some of the differences between stable and unstable diabetics.

Discussion

A distinct concordance between the occurrence of frequent insulin reactions and elevated fasting growth hormone is demonstrated in these studies in the ambulatory diabetic, and is essentially in agreement with the findings of Molnar *et al.*[20] in unstable hospitalized diabetics. The finding of higher fasting growth hor-

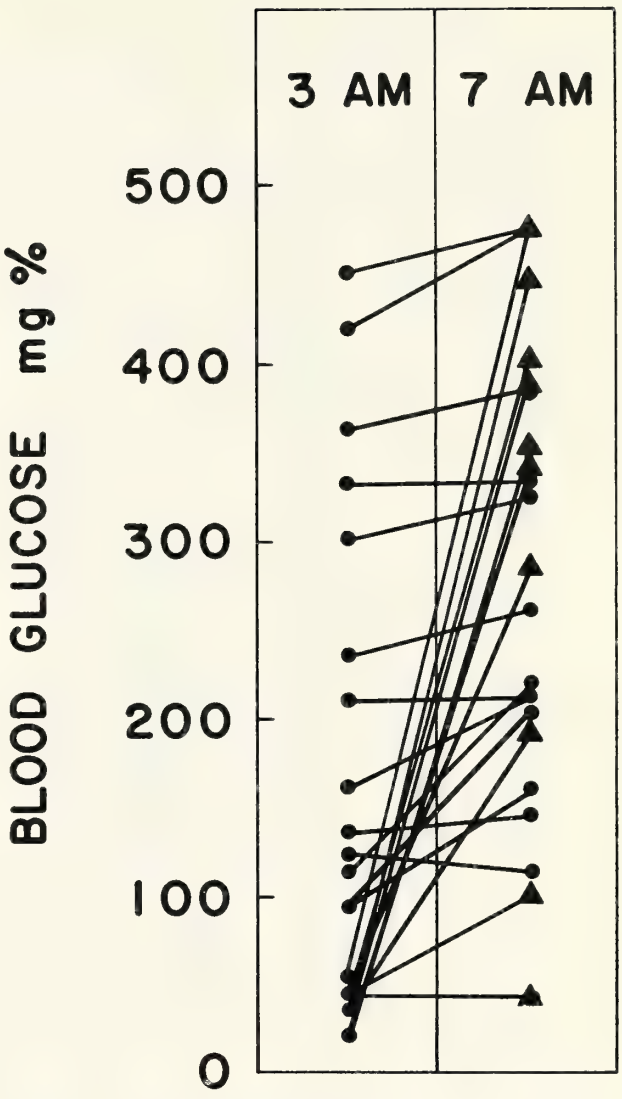


Figure 4. The triangular points represent the 7:00 AM glucose in subjects in whom the 3:00 AM glucose was below 50 mg/100 ml.

TABLE V

INCIDENCE OF DIABETIC RETINOPATHY IN STABLE AND UNSTABLE GROUPS

Duration of Diabetes	*Retinopathy* PRESENT	ABSENT
Stable		
Less than 6 years	1	5
6-10 years	1	1
11-40 years	8	16
Unstable		
Less than 6 years	0	13
6-10 years	0	3
11-40 years	22	11

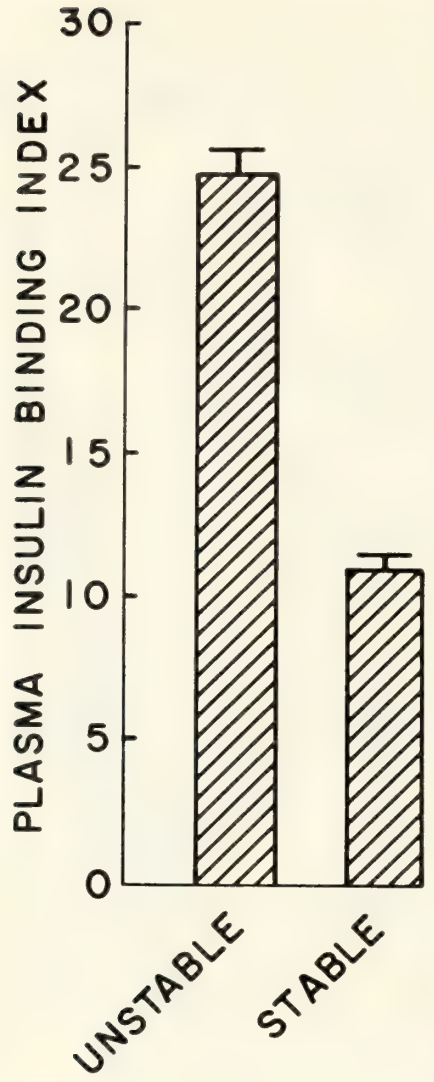


Figure 5

mone levels in the unstable group is of interest especially in view of the coincident preponderance of diabetic retinopathy in the same group. In view of the possible causal role which the elevated HGH levels might have in the genesis and course of retinopathy,[28–33] it is important to question the role which inappropriate insulin treatment itself might have in the genesis of elevated HGH levels.

While it is putative that an HGH response can be secondary to insulin evoked hypoglycemia, Sonksen *et al.*[19] and Fatourechi *et al.*[8] noted increases in growth hormone in diabetics before there was a drop in the blood glucose. Hansen[34] also concluded from studies of exercise in diabetics that the rise in HGH was directly related to the insulin administration. Molnar *et al.*,[9] using continuous glucose monitoring, often noted an HGH response to hypoglycemia at blood glucose levels higher than those needed to evoke an HGH response in insulin infused nondiabetics.

Somogyi[21] noted that nocturnal hypoglycemia is often followed by compensatory rises in the morning blood glucose. Of the four known hormonal homeostatic responses to hypoglycemia[35]—catecholamines, glucagon, cortisol, and growth hormone—the last possesses timing characteristics that render it most useful in the detection of occult, early morning hypoglycemia.

In the present study, a clinically recognizable insulin reaction was noted in the two thirds of the unstable diabetics showing a HGH level significantly above the mean of the stable diabetic group. Although only 30 per cent of the reactions were subjectively reported after midnight, a much higher incidence of hypoglycemia during this period must be assumed in view of the finding of asymptomatic hypoglycemia in 50 per cent of the unstable diabetics sampled at 3:00 AM. It then becomes possible to ascribe most of the morning elevations of growth hormone in the unstable diabetic to either recognized or occult hypoglycemia in the early morning hours. Because the plasma half life of HGH is only about 20 minutes,[36] there is a problem in attributing the morning growth hormone elevations to reactions occurring prior to one hour before the sampling for HGH. This constraint does not hold up, however, when the dynamics of insulin reactions are considered.

In the continuous monitoring studies of Molnar *et al.*,[9, 20] HGH elevations were often demonstrable for a period of four hours after initiation of a hypoglycemic episode. Nakagawa *et al.*[37] determined the plasma levels of free insulin in insulin treated diabetics, and demonstrated that the fluctuations in levels of insulin occurred over a period of hours, not minutes. Thus, this represents a gross divergence from the pattern of rapid fluctuations in plasma insulin levels seen normally in response to a glucose load. The drive resulting from a state of inappropriate hyperinsulinemia could be expected to endure in the fasting state for a number of hours, offset only by the homeostatic effects of catecholamines, glucagon, cortisol, and growth hormone. With this in mind, the association of an elevated fasting HGH and insulin reactions, symptomatic or occult, in the early morning hours becomes more understandable.

The finding of a fasting HGH level over 2 ng/ml in an unstable diabetic in the absence of other obvious stress should, therefore, be taken as strong evidence of inappropriately high insulin levels during the preceding several hours.

The average total insulin dose in stable and unstable diabetics was essentially the same, so the difference in the behavior between these two groups with respect to

fasting HGH must be sought elsewhere. One possibility may be simply the difference in endogenous insulin reserve in the two groups as suggested by Molnar.[38] Another factor may be the higher insulin antibody levels in the unstable diabetic which could be expected to alter the pattern of insulinemia.[27, 37, 39] Other than the use of less antigenic insulins,[40] no complete solution to this dilemma is evident at this time. A greater dependence on short acting insulins in multiple doses has been proposed as a solution to this problem,[39, 41] but is disappointing as shown by Molnar *et al.*[20] Many blank areas exist in the observation of the ambulatory diabetic, and most obvious are the events occurring in the early morning fasting hours before awakening. Ricketts[42] has affirmed the inadequacies of conventional methods of surveillance of the diabetic, since at best they sample only brief moments in a prolonged disease course. The sampling of the fasting growth hormone level in ambulatory diabetics may be considered as an additional index of the state of regulation.

Summary

The morning ambulatory fasting plasma growth hormone (HGH) was studied in 201 diabetic and 37 normal subjects. Mean values were higher for the unstable diabetics (5.7 ± 0.5 ng/ml) and less for stable insulin-dependent diabetics (0.3 ± 0.1 ng/ml), insulin independent diabetics (1.3 ± 0.5 ng/ml), and normal subjects (1.8 ± 0.2 ng/ml). The highest values were found in the unstable diabetics who reported insulin reactions within the preceding 24 hours. Approximately 42 per cent of the variation in the fasting HGH could be accounted for by changes in the insulin dosage.

Some insight as to the cause of the higher HGH values was obtained from the finding of asymptomatic hypoglycemia in 10 of 20 hospitalized unstable diabetics awakened at 3:00 AM for a blood glucose determination, though the 7:00 AM glucose was normal or elevated. The difficulty in maintaining optimal regulation in the unstable diabetics was in part explained by the greater binding of insulin by the plasma in that group.

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UNIVERSITY OF KANSAS MEDICAL CENTER

POSTGRADUATE MEDICAL EDUCATION

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ALAN W. CONN, M.D., University of Toronto, Ontario, Canada.
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Registration Fee: $150.00

A Gift of Life

Kidney Retrieval

FREDERICK C. WHITTIER, M.D., DONALD E. CROSS, M.D., JARED J. GRANTHAM, M.D., ARLO S. HERMRECK, M.D. ***and*** **WINSTON K. MEBUST, M.D.,** ***Kansas City, Kansas***

A project of harvesting and perfusion of donated kidneys in Kansas is described.

DONOR KIDNEYS are presently received principally from the greater Kansas City metropolitan area. Prior to March 1974, no donor kidneys had come from any other Kansas cities; there is a pressing need for donor organs to be used for kidney transplantation in Kansas. According to recent reports,[1, 2] approximately 120 persons a year in Kansas can be expected to develop kidney disease, and require dialysis or kidney transplantation to sustain their life. At the present time, there are 80 patients at the Kansas University Medical Center and the Kansas City Veterans Administration Hospital, and 120 patients at St. Luke's and Research Hospitals in Kansas City waiting for a transplant operation. Nearly 50 per cent of these patients are from Kansas. Kidney dialysis units in the state have reported that the patient load is increasing at a prodigious rate, with patients on waiting lists to receive hemodialysis treatment. Even greater numbers of kidney patients are expected to seek treatment in the future, due to the financial assistance provided to them under the recent amendment to the Social Security Act commonly referred to as HR-1.

There are multiple reasons why the patient and the physician should encourage renal transplantation for the treatment of end stage renal failure. The quality of life for the transplant recipient is the most important consideration. The recipient of a successful transplant will no longer be subjected to hemodialysis for six to eight hours three times per week. Complications of dialysis such as anemia, peripheral neuropathy, and metabolic bone disease will be alleviated. The patient will no longer be inconvenienced by the alteration of protein, salt, potassium, and fluid in the diet. Occasional medical checkups and daily immunosuppressive medications replace the time-consuming hemodialysis machine. It is usual for the recipient of a successful transplant to return to full-time work and be able to support his family.

In addition to the human needs, there are important financial problems if the pace of transplantation is slowed because of a lack of donor kidneys. It is estimated that 120 new patients in Kansas each year will seek hemodialysis at an average cost of $20,000 per year per patient for center dialysis. If each of these patients were transplanted shortly after starting dialysis, an estimated savings of $18,000 per patient per year might be realized, or a total of $2 million per year for the entire state of Kansas.

It should be emphasized that kidney transplantation is no longer considered an experimental procedure. The most recent report of the National Transplant Registry[3] documents a 60 per cent overall success rate for renal transplantation which encompasses 12,000 transplants. In the Kansas City metropolitan area, there are three institutions in addition to the Kansas University Medical Center where kidney transplantation is performed: St. Luke's Hospital, Research Hospital, and the Veterans Administration Hospital. Most of the kidney transplants for patients in Kansas and Western Missouri are performed in these hospitals. These four institutions share kidneys by means of a centralized perfusion and tissue typing laboratory. Of some concern is the fact that although there are over 200 patients on dialysis machines in the region, only 27 kidney transplants were performed in Kansas City in 1973. The Kansas University Medical Center harvested 16 donor kidneys for transplant recipients last year, and performed 8 kidney transplants. It is likely that the number of donor kidneys obtained from the University Hospital will not increase substantially in the future. With the energy crisis and the reduction of automobile speed limits fewer fatal accidents are occurring, and since the supply of donor organs is directly related to fatal accidents, further shortage of donor organs in any one lo-

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Supported by a grant from the Kansas Regional Medical Program.

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cale is to be anticipated.

Consequently, to increase the source of supply of kidneys, it is essential to gain support from the geographic areas other than Kansas City. Physicians in Wichita, Topeka, Salina and Garden City *(Table I)* have estimated that 60 donor organs could be retrieved yearly provided that trained personnel and equipment for kidney retrieval were made available. The purpose of this report is to describe a new project of the Kansas Regional Medical Program administered by the Kidney Foundation of Greater Kansas and Western Missouri, which will make possible the retrieval of donated kidneys in four additional sites in Kansas: Wichita, Salina, Topeka, and Garden City,

Project Description

Surgeons and technicians in the four participating cities will be trained in a four-step program to perform donor nephrectomies and to perfuse the organs until transplantation *(Table II)*. An initial visit to the participating site by one of the program directors and the project technician will be made for the purpose of orientation. Meetings will be held in each community with interested physicians, hospital administrators, nurses, and technicians to explain the program in detail. Each community will then select the technical personnel and physicians to participate in the project. Step Two starts with the training of the technical personnel at the perfusion laboratory in Kansas City. During a one-week course, there will be didactic material, orientation about the equipment, and the harvesting of canine kidneys. During Step Three, participating surgeons will be invited to a one-day seminar on donor nephrectomy and organ perfusion in Kansas City. Didactic material will be integrated with practical training, using the perfusion apparatus and simulated kidney removal from a human cadaver. Upon completion of the first three steps, the project will focus on kidney retrieval in the participating community with the assistance of one of the project directors and the project technician.

TABLE I
COMMUNITY PARTICIPATION

Physician	*City*
Hugo P. Weber, M.D. W. Thomas Meredith, M.D.	Wichita
James A. McClure, M.D. Robert D. Porter, M.D.	Topeka
Ramon W. Schmidt, M.D. F. Calvin Bigler, M.D.	Garden City
David A. Lasley, M.D. Rex Romeiser, M.D.	Salina
Frederick C. Whittier, M.D. Donald E. Cross, M.D.	Kansas City

TABLE II
TRAINING PROGRAM

Step 1	Project Orientation	Participating City
Step 2	Technician Training	Kansas City
Step 3	Physician Training	Kansas City
Step 4	First Organ Harvest	Participating City

Each participating city will be provided with the equipment and initial supplies necessary to perform a donor nephrectomy and to perfuse a donor organ. The initial issue will include a mini-Belzer perfusion apparatus [LifeMedCorporation, Compton, California] *(Figure 1)* with enough cassettes, initial kidney flush solutions, perfusion solutions, and renal artery cannula trays to perform two donor nephrectomies and kidney perfusions.

A Kidneymobile has been outfitted with the special equipment required for transporting kidneys among the participating cities *(Figure 2)*. This vehicle is equipped with oxygen, dual electrical system, surgical packs for organ harvesting, mini-Belzer perfusion apparatus, and a complete set of disposable supplies. To facilitate communications, a mobile radio and transmitting system will be installed in each city and in the retrieval vehicle for communications while en route. Upon the call of a participating hospital, the Kidneymobile will proceed

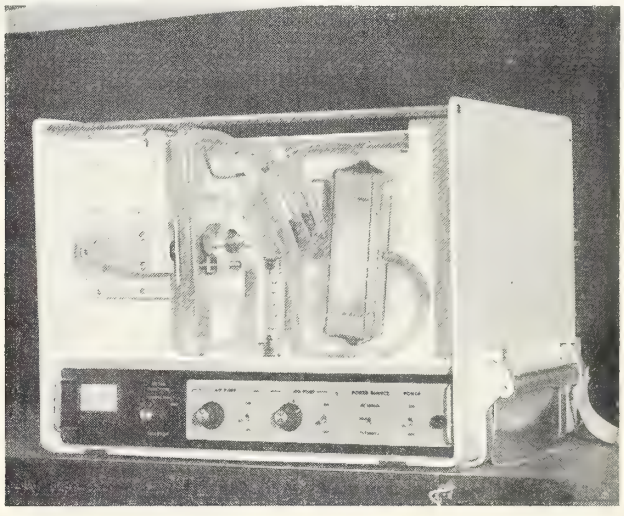


Figure 1. Mini-Belzer perfusion apparatus installed in the Kidneymobile.



Figure 2. Kidneymobile.

to the city, obtain the kidneys being perfused, resupply an empty perfusion apparatus and supplies, and return to Kansas City. The kidneys will then be tissue typed, the recipient will be summoned, and the transplantation commenced well within the 72-hour time limit necessary for survival of the donor organ. Prior to the advent of this program, kidneys had to be reimplanted within six hours after storage on ice, making it almost impossible to retrieve kidneys from cities outside of a transplant center.

Physicians from nearby communities as well are encouraged to participate in this project. If a kidney donor is present in any community in the state, arrangements for harvesting and perfusion could be made by contacting one of the participating physicians *(Table I)*.

It is anticipated that the people of Kansas will be made more aware of the shortage of kidneys through public education efforts and Gift of Life campaigns being conducted by the Kidney Foundation of Greater Kansas and Western Missouri. Indeed, this voluntary health agency would like to place an organ donor

UNIFORM DONOR CARD

OF_____
Print or type name of donor

In the hope that I may help others, I hereby make this anatomical gift, if medically acceptable, to take effect upon my death. The words and marks below indicate my desires.

I give: (a) ____ any needed organs or parts
(b) ____ only the following organs or parts

_____
Specify the organ(s) or part(s)

for the purposes of transplantation, therapy, medical research or education;
(c) ____ my body for anatomical study if needed.

Limitations or special wishes, if any: _____

Signed by the donor and the following two witnesses in the presence of each other:

_____ Signature of Donor
_____ Date of Birth of Donor
_____ Date Signed
_____ City & State
_____ Witness
_____ Witness

This is a legal document under the Uniform Anatomical Gift Act or similar laws.

For further information consult your physician or

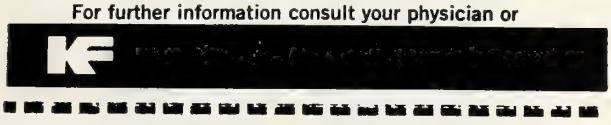


Figure 3. Uniform donor card of the National Kidney Foundation.

card *(Figure 3)* in the hands of every Kansas resident.

Summary

A prospective project for the harvesting and perfusion of donated kidneys is being developed to increase the supply of kidneys for Kansans. Equipment and training will be provided in five regions of the state in an attempt to increase by 60 the number of transplants. Physicians in surrounding communities are encouraged to participate as well. This project is designed to decrease the number of patients on dialysis awaiting transplantation and to increase the number of renal transplants with the resultant improvement in quality of life for the patient.

References

1. Pendreigh, D. M.; Heasman, M. A.; Howitt, L. F.; Kennedy, A. C.; MacDougall, A. I.; MacLeod, M.; Robson, J. S., and Stewart, W. K.: Survey of chronic renal failure in Scotland. *Lancet* 2:304-307, 1972.

2. McGeown, M.: Chronic renal failure in Northern Ireland, 1968-70. *Lancet* 2:307-310, 1972.

3. Eleventh Report of the Human Renal Transplant Registry. *JAMA* 226:1197-1216, 1973.

Vox Dox

Vox Dox Editor:

In the popular realm of cosmetic plastic surgery, many physicians claim special competence. Generally, they base their claim on board certification, often with little or no in-depth review of their surgical performance. This leaves referring doctors, as well as patients, with no reasonable assurance of getting high quality work.

The problem stems essentially from a common misunderstanding in medicine as to what board certification really means. In effect, American boards certify that the physician has met minimum requirements in education and training. No specialty board, through certification, *recognizes or attests to special proficiency* in cosmetic surgery, or any other form of surgery.

For this reason, the American Association of Cosmetic Surgeons has established a peer review program which we feel will assure special capability and standards of physicians practicing aesthetic or cosmetic surgery. We do not transcend the function of any certifying board. We simply assume responsibility where theirs ends.

The American Association of Cosmetic Surgeons recognizes that a physician's excellence in performance of various cosmetic surgical procedures stems not only from basic training, but from personal interest, continued education, and experience. Unusually high membership requirements effect a method of peer review, thus assuring the public of a consistently high standard of medical care in this field.

We bring this news to your attention because we believe it significant. Further information is available from our Secretary, on our specific measures for implementing peer review. Meanwhile, you may want to relate this information to your governing body and others who might be interested. Thank you.

WALTER E. BERMAN, M.D., President
The American Association of
Cosmetic Surgeons
1111 Tulane Ave., Suite 322
New Orleans, LA 70112

The President's Message



In one of the President's messages last summer, I promised to discuss further the admissions to the Medical School. However, since I have spoken of this on several occasions, I shall not pursue it again.

At this time, I wish to express the appreciation and thanks of the Medical Society to Doctors Culp, Colip, Hodges, Yoder, McElhinney and Matassarin for their splendid dedication and cooperation in serving on the Admissions Committee for the Class of 1975. This committee met during the Christmas holiday break, a total of 90 man-days was put in by 12 staff members from the University, plus 6 physicians in private practice, totaling in excess of 1,000 hours work in admitting this class.

Fifty years ago, I first considered going away to college. Why did I go to Kansas University? PRIDE. Mount Oread represented greatness, a motivation to achieve and, above all others, the opportunity to realize a driving ambition of becoming a physician. Today, five decades later, it still remains an intensive source of pride; its successes are mine, its failures cause sadness. Such great institutions as KU allow for no comparison—it is an individual with style, character, dignity. "I am a Jay Jayhawk" truly means something.

Too often we tend to measure a medical school by its bank account, endowments, bigness, and so forth. However, it is its contribution to the welfare and the pride of the graduates and all the other supporters of the institution have for it that stands the test of time. Graduates of KUMC of 10, 20, 30, 40, and 50 years have seen and have known many inspired leaders of our great Medical School who have stood this test of time. The contributions of such men as Orr, Hawkins, Wahl, Major, Denney, Bohan, Sutton, and later Murphy, are legend. We measure these individuals now by their courage and the intensity of their vision that combined a mighty will and a heart to produce an outstanding medical institution during the greatest depression this nation has ever known. They are remembered and blessed as a creator of this great medical institution through whose doors today the gifted, talented, highly motivated sons and daughters of Kansans can and do receive an education second to none.

In closing, a great university and an equally great medical school never remind us of other institutions—they are beyond comparison.

John G. Blume

President



Editorial COMMENT

Look What's Happened to Mabel

In the beginning, she was hired on as a receptionist, cashier-bookkeeper (for such cash as came in and such books as were kept), boiler of instruments, and general cleaning woman—at times even baby-sitter when the boss and his wife sneaked off to a meeting. Mabel had the title of "office girl" which was perhaps more accurate as to location than to age. If she lasted beyond the first week, she became indispensable if for no other reason than the fact that she was the only one who knew where things were. She came to know more about the patients in some ways than the boss did. She learned to interpret his moods (some of which she created since she was not above moods of her own) and became adept at accomplishing her ends by making him think he had thought of them first.

No one thought of calling her a "physician's assistant" although she was. She and some of the girls up and down the hall did get together and decide to call themselves medical assistants, which seemed agreeable to everyone. But the beginning of the current "physician's assistant" phenomenon occurred one day when the boss was leaving on an emergency, just as Mrs. Schmaltzenheimer arrived for her weekly Vitamin B shot and the boss called over his shoulder for Mabel to go ahead with it. No one quite recognized the seeds of change—the boss just found it expedient to pass more such activities on to her, Mabel enjoyed it, and Mrs. Schmaltzenheimer confided that Mabel hurt less than the old goat did anyway. And Mabel was into the practice of medicine. True, she was (usually) just following orders and the boss was still responsible for the fact and the results, but it had been established that there were others besides the boss who could, if necessary, implement the mysteries and esoterica of the profession. Without formal statement, the concept developed that there was no small number of medical activities which could be accomplished by a person of reasonable intelligence and guided experience and, thereby, extend the physician's capacity to cover the territory. Even without the blessings of an action committee, the boss was willing, Mabel was willing, and Mrs. S. was willing.

It might have continued as a simple matter of convenience except for three things. First, the physician's overall success resulted in there being a lot of people around that weren't in earlier times. The physician allowed he'd one day figure out some time-saving techniques, but for the most part he just didn't give Mrs. S. as much time as she was accustomed to, and presumed she would realize his hocus-pocus was so much more effective than the hocus-pocus his grandfather had used that she was really much better off whether she saw him or not. Second, the practice of medicine was confronted with an explosive increase in the medical knowledge and application, so the physician was increasingly hard pressed to provide everything to everyone, and Mabel's assignments increased in number and technical requirement. Third, Mrs. S. noticed that she was paying a lot more for less attention and reasoned not that he was having to pay more for everything too, but that he was making more than he should and, anyway, why shouldn't it cost less if Mabel did more of it?

It is a favorite cliche of the day to note that something is "an idea whose time has come," and it appears that the physician's assistant is one of them. While the nursing profession has (in the opinion of many physicians) moved too far into the areas of administration and education, it has nevertheless also increased the specialized professional services of its members and transferred to trained practical nurses and aides many of its earlier duties. This increasing stratification seems to be confronting the physicians too, a confrontation which disturbs many who view the trend as a threatened displacement rather than an adjunctive method for extending medical service. They point out (correctly) that only the physician can provide definitive medical care, but overlook the fact that it is exactly this feature which, if properly sustained and nourished, will assure his continued essentiality in the area of control while others carry out the provisions of the service.

The current status of the trend is uncertain as befits the practical development of an emerging concept. Particularly, it is undetermined how this extension of medical service should be accomplished and what the results will be. In theory, the physician utilizing the services of one of the several varieties of assistants—and thereby presumably having more time available—will immediately fill in that time with more of his specialized service. Human nature being what it is, however, it must be considered that to some extent it will go simply toward easing the pressures on him and permitting him to pursue other activities. Such an effect is not necessarily unsalutary—it may even result in his extending his service by living longer—but it will certainly influence the apparent efficacy of the plan. At the same time, the control he must exert over the physician's assistant and the coordination of patient care will occupy some of his time so the net accomplishment in terms of time-profit must be reckoned after these time-expenditures have been deducted.

The other presumed benefit of the plan is financial. It is reasoned that the routine and simpler duties can be detached from the physician's workload and be performed by those of lesser training at lesser cost. In other words, the patient should pay less for the combined service than he did for the physician's service alone or get more service for the same cost, results which should be anticipated with some caution. While some patients might pay out less in the long run, it would seem probable that the total amount of health care will be larger and there is no way this can avoid increasing the total health care bill. True, the increase may be justified by saying more people are receiving more medical attention, but one is reminded of the early days of Medicare when the bills began to roll in. It was not the increased care to the elderly or his previously unremunerated services which were noted by the physician's critics, but the cost—which was attributed to the avarice of the physician (an interpretation which was abetted out of proportion, of course, by the relatively insignificant instances of true fraud). Once more, the physician is faced with the necessity of reminding society that total and ideal medical care is a laudable goal to which he has subscribed more consistently and effectively than any other group, but it won't be achieved without cost.

It appears at this point that the extension of medical service through a physician's assistant program will be pleasing to the public. It will provide perhaps a more extensive—but different—system of care. The public will be attracted by the prospect of increased medical coverage, and discount the differences this will impose since it has no way of defining these prospectively. It feels that the deficiencies of the current system were imposed on it by the physician for his own convenience and remuneration or, at least, his lack of control permitted inequities of distribution and cost. The changes that are emerging will at least be accomplished with public awareness and approval. We get the feeling the public expects the best of both worlds—the house call, the personal attention, service to the medically deprived (whether of geographic or economic origin), and so on —and at the same time, the vaunted benefits of the extensive and sophisticated medical expertise of the day administered with financial analgesia.

Once more, the physician is faced with a public relations problem. He recognizes the value to himself and to the public of the judicious use of adequately trained and controlled personnel to assist him in his function. He also recognizes the problems inherent in providing this training and control. He must stimulate and direct the mechanics of the transition and at the same time restrain and condition the process to keep it within the limits of its intended purpose. Legislative permission is already well underway. And already some groups and individuals with limited medical training, and independent of formal physician supervision, are moving into some areas, admittedly underserved medically before, making a strong case for their value by citing patient acceptance. Once established, such individuals will be brought under physician control only at the risk of the profession again appearing self-seeking and petulant.

Perhaps we are seeing the emergence of a new and distinct stratum of medical care which will be established as a defined, respected, and productive segment of medical service. The physician and nurse have maintained a long and generally (though not always) amicable relationship based upon the concept that each has a service to provide. The physician has frequently cited the growth of medical knowledge as a drain on his physical, mental and temporal resources, which has necessitated his shortening or forsaking some phase of his service. It seems time to translate this into a system which recognizes and accepts those capable of providing these phases as respected and responsible colleagues. Antagonists will cite the current deficiencies of some of these and the injudicious independence of others as reasons to fault the whole concept. But this discounts the need for some solution, ignores the inherent and proper position of the physician to provide the training and control necessary, and denies the well-documented proof that the individual who is given responsibility and dignity will respond creditably.

So Mabel is alive and well and loading the syringe to give Mrs. S. her shot. Her new uniform may not be a miracle fabric, but it should be serviceable and require a minimum of pressing—and should be provided by the boss.—*D.E.G.*

TO: All Members of the Kansas Medical Society

This is a reminder that the annual meeting of the House of Delegates of the Kansas Medical Society will meet at the Glenwood Manor Motor Hotel in Overland Park, Kansas, on Sunday, May 4, 1975.

Several changes have been made in the order of the meeting and these are very important, so be sure to make special note of the following items:

First House of Delegates meeting	**9:00 AM Sunday, May 4**
Reference Committee A	**2:00 PM Sunday, May 4**
Reference Committee B	**9:00 AM Monday, May 5**

These changes were made in the hope of making it easier for all of the delegates to attend both reference committee meetings. Also, they should free you to participate in the sports events, as you will have completed the business portion of the meeting in plenty of time to do so.

This is also a reminder that if you or your county society wish to introduce resolutions at the Annual Meeting, these must be submitted to the KMS Executive Office prior to April 4, 1975. This requirement is in no way an attempt to limit your prerogative as a member or delegate of the Kansas Medical Society, but is an attempt to make it more meaningful for those delegates who are present. Those resolutions received by *March 25,* will be published in the April issue of THE JOURNAL OF THE KANSAS MEDICAL SOCIETY, which will give all members and societies an opportunity to discuss them and instruct their delegates before the meeting.

This also is a reminder to those districts who must re-elect their Councilors, that this is to be done prior to the convening of the House of Delegates.

We will be looking forward to seeing you in Overland Park on Sunday, May 4. Don't forget, the First House of Delegates meeting will be on Sunday, May 4, at 9:00 AM. It is important that all of the delegates be there on time, so that official business can be done.

CLAIR C. CONARD, M.D.
Speaker, House of Delegates

M. ROBERT KNAPP, M.D.
Vice-Speaker, House of Delegates

NEW MEMBERS

The JOURNAL *takes this opportunity to welcome these new members into the Kansas Medical Society.*

A. J. Aillon, M.D.
The Hertzler Clinic
Halstead, Kansas 67056

H. D. Lewis, Jr., M.D.
7229 Woodward
Shawnee Mission, Ks. 66204

Richard B. Darr, M.D.
9114 Riggs Lane, Apt. B
Overland Park, Ks. 66212

D. E. Lorentzen, M.D.
201 S. Pine
Newton, Kansas 67114

Helen H. Jorg, M.D.
7500 West 95th St.
Shawnee Mission, Ks.
66212

Poly Tan, M.D.
The Hertzler Clinic
Halstead, Kansas 67056

AMERICAN PHYSICIANS ART ASSOCIATION

An invitation is extended to physicians to join the national non-profit organization which is dedicated to furthering art interests of the medical profession, to stimulating physician artists to produce works of art in the fields of painting, sculpture, photography, graphic arts, design and creative crafts; to holding a national annual exhibition of physicians' art works; and to stimulating regional art exhibitions of physicians' works at local, state and specialty meetings—The American Physicians Art Association.

You do not necessarily have to be currently engaged in any art activity to become a member. Various types of membership are available.

If interested, or for further information, please contact the President of APAA, Victor C. Laughlin, M.D., 3270 Green Road, Cleveland, Ohio 44122.

Letters to VOX DOX should be addressed to the Vox Dox Editor, Journal of the Kansas Medical Society, 1300 Topeka Avenue, Topeka, Kansas 66612.

IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid,* 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

454 R

When diarrhea has his number...



Lomotil puts him back in the game.

Physicians and patients both want prompt control of the symptoms of diarrhea. A rapid, uncontrolled loss of fluids and electrolytes can cause a medical crisis, particularly in children, and in patients who are seriously ill, or in people who are badly undernourished.

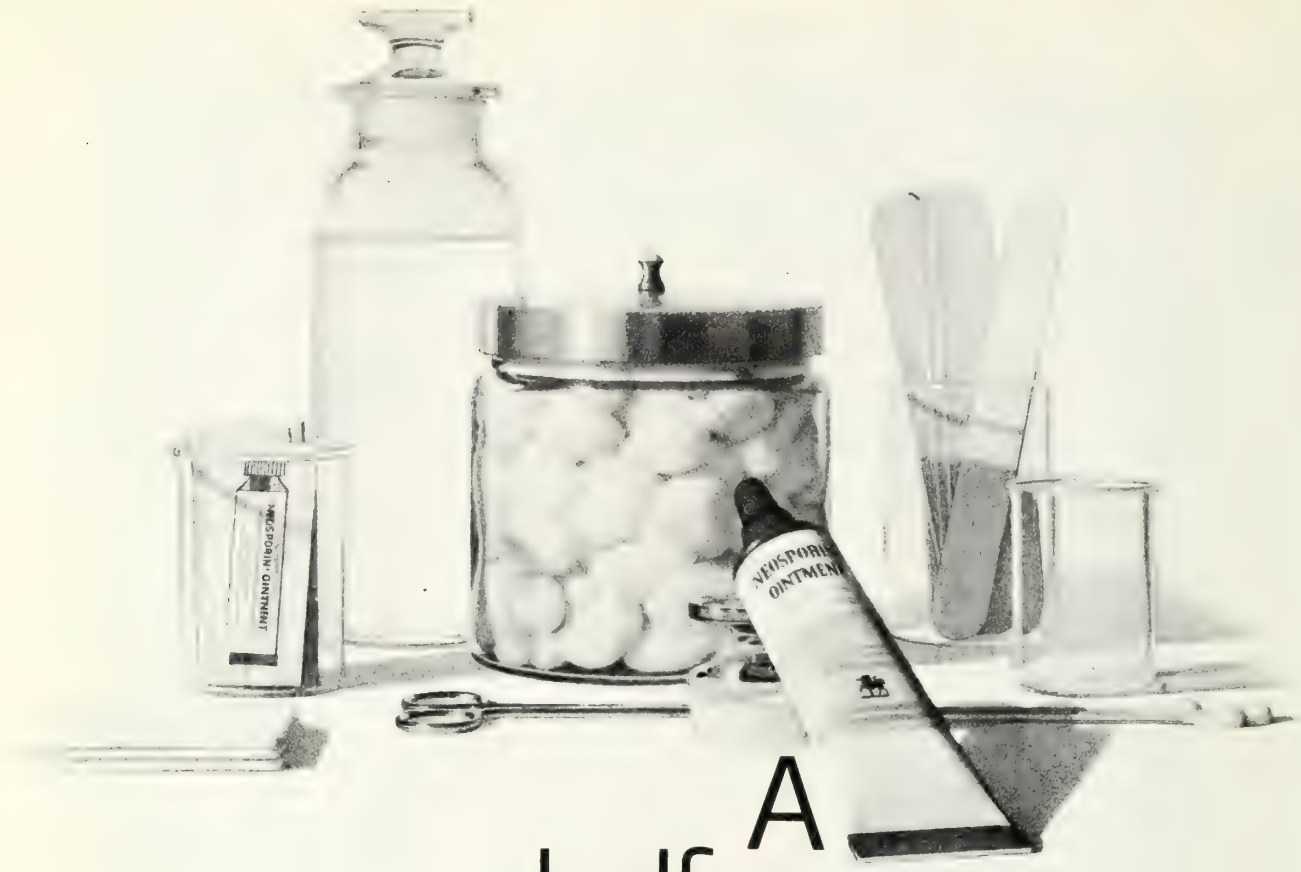
Lomotil usually stops diarrhea promptly. This rapid action halts the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate antibiotic therapy should be given along with Lomotil.

Lomotil has few side effects, and those that do occur are generally mild.

Lomotil®
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride ..... 2.5 mg.
(Warning: May be habit forming)
atropine sulfate ..... 0.025 mg.

Usually stops diarrhea promptly.



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started. In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare. Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced. Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Neither inconvenient potassium supplements nor special K^+ rich diets needed as a rule. Just 'Dyazide' once or twice daily for maintenance.



Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

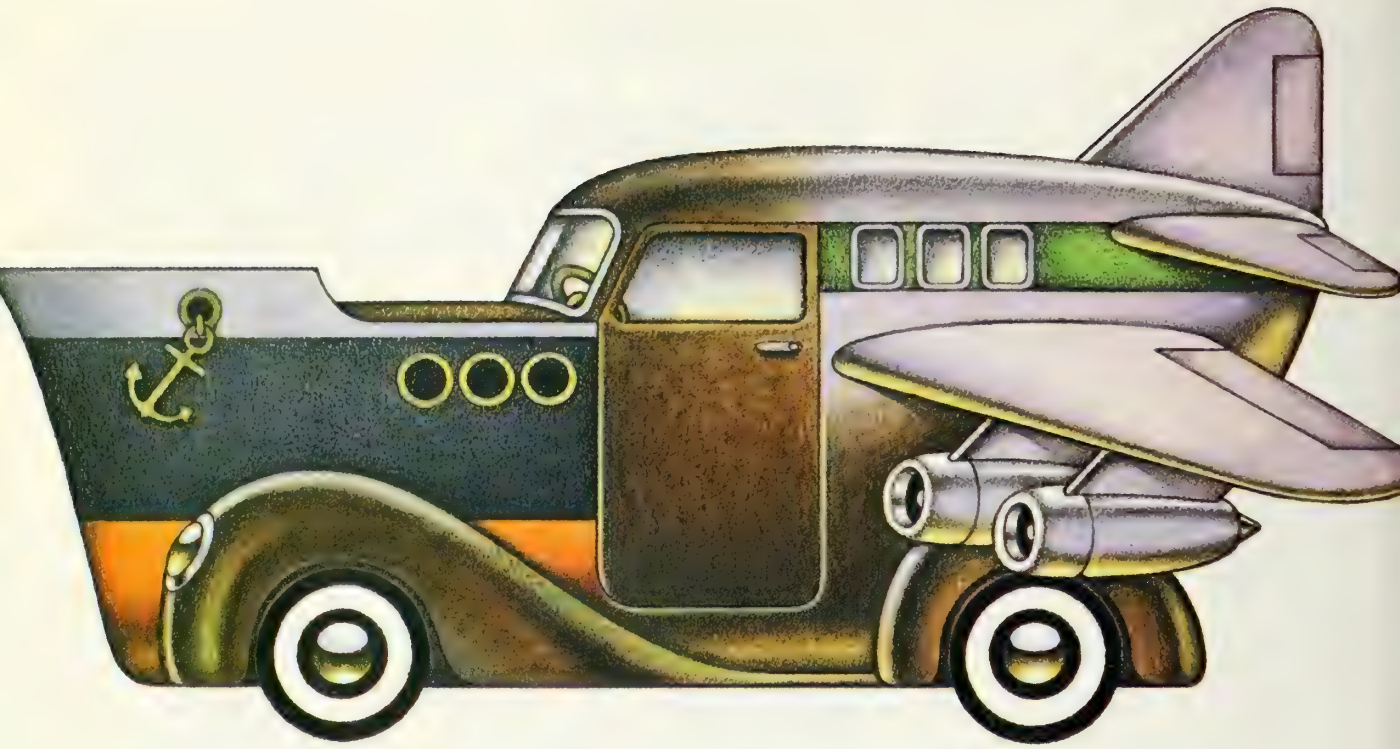
Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
Carolina, P.R. 00630
Subsidiary of
SmithKline Corporation

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP



On land, sea, and in the air...

Up to 24 hours of effective control with a single dose...in nausea, vomiting and dizziness associated with motion sickness.

Dosage: 25 to 50 mg. 1 hour before travel.

Available on prescription only.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25 Chewable Tablets
(meclizine HCl) 25 mg.
for motion sickness



Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed. "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

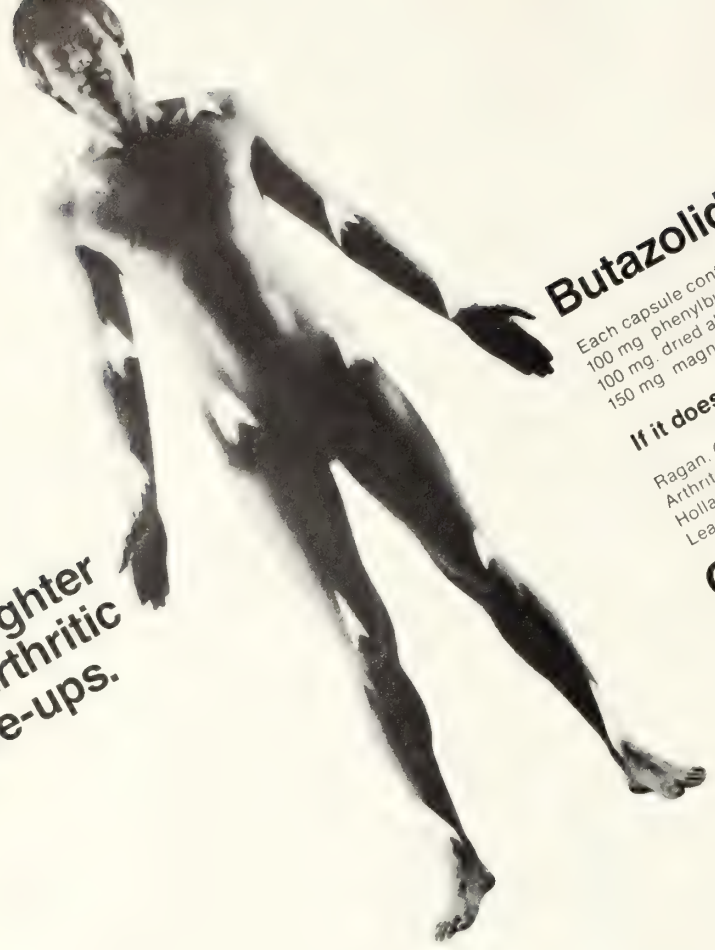
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



Butazolidin® alka

Each capsule contains
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335

Geigy

Fire fighter for arthritic flare-ups.

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy; blood dyscrasias, renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema, stomatitis and salivary gland enlargement due to the drug polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BU 10259

"Gentlemen, congratulations are in order."



"A.H. Robins asked me to compare the banana flavor of their Donnagel® -PG with the real thing and, by jove, I couldn't tell the difference. Not even in sip-by-sip comparison. Amazing!

"There's no unpleasant paregoric taste because there's no paregoric. Clever, wouldn't you say? Instead, A. H. Robins uses the therapeutic equivalent, powdered opium, to promote the production of formed stools and lessen the urge. And Donnagel-PG also provides the demulcent-detoxicant effects of kaolin and pectin, plus the antispasmodic benefits of belladonna alkaloids.

"But what I find most impressive is the skillful manner in which A. H. Robins has combined these ingredients with that delicate flavor of vintage bananas. Smashing, absolutely smashing!

"May I propose a toast?"

Donnagel®-PG. ℞

Donnagel with paregoric equivalent
Each 30 cc. contains:

Kaolin	6.0 g.
Pectin	142.8 mg.
Hyoscyamine sulfate	0.1037 mg.
Atropine sulfate	0.0194 mg.
Hyoscine hydrobromide	0.0065 mg.
Powdered opium, USP	24.0 mg.
(equivalent to paregoric 6 ml.) (warning: may be habit forming)	
Sodium benzoate (preservative)	60.0 mg.
Alcohol, 5%	

℞ Available on oral prescription or without prescription in compliance with applicable state and local law.

A·H·ROBINS

A. H. Robins Company, Richmond, Virginia 23220


Robitussin
Robitussin DM
Cough Cumpx

A·H·ROBINS

IN COUGHS OF COLDS, FLU, AND U.R.I.- CLEAR THE TRACT WITH THE ROBITUSSIN® LINE

Fall and winter coughs are back. Time to help clear the lower respiratory tract with the five Robitussins and Cough Calmers. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For unproductive coughs

ROBITUSSIN®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Alcohol, 3.5%

For severe coughs

ROBITUSSIN A-C®℄

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Codeine phosphate ..... 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

ROBITUSSIN-DM®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Dextromethorphan hydrobromide ..... 15 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

COUGH CALMERS®

Each Cough Calmer contains:
Glyceryl guaiacolate ..... 50 mg.
Dextromethorphan hydrobromide ..... 7.5 mg.

Clears nasal and sinus passages as it relieves coughs

ROBITUSSIN-PE®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Phenylephrine hydrochloride ..... 10 mg.
Alcohol, 1.4%

MEET THE NEWEST MEMBER OF THE LINE

Comprehensive decongestant action helps control cough and clear stuffy nose and sinuses. Non-narcotic.

ROBITUSSIN®-CF

Each 5 cc. contains:
Glyceryl guaiacolate ..... 50 mg.
Dextromethorphan hydrobromide ..... 10.0 mg.
Phenylpropanolamine hydrochloride ..... 12.5 mg.
Alcohol, 1.4%

Select the Robitussin® formulation that treats your patient's individual coughing needs:

	Expectorant-Demulcent	Cough Suppressant	Long-Acting (6-8 hours)	Nasal Sinus Decongestant	Non-Narcotic
ROBITUSSIN®	●				●
ROBITUSSIN A-C®	●	●			
ROBITUSSIN-DM®	●	●	●		●
ROBITUSSIN-PE®	●			●	●
ROBITUSSIN®-CF	●	●		●	●
COUGH CALMERS®	■	■	■		■

A. H. Robins Company, Richmond, Va. 23220

Fasting HGH in Diabetes

(Continued from page 69)

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Information for Authors

Manuscript Preparation

Manuscripts must be typewritten, double spaced, leaving wide margins. Submit the original, plus one copy if possible.

Titles should be short, specific, and amenable to indexing. A subtitle is frequently used to keep the main title short.

Summary: All manuscripts should include a short abstract which is a factual (not descriptive) summary of the work.

Author Responsibility: The author is responsible for all statements made in his work, including changes made by the copy editor. Manuscripts are received with the explicit understanding that they are not simultaneously under consideration by any other publication. Publication elsewhere will be subsequently authorized at the discretion of the Editor.

Galley Proof: To make extensive changes in the article after the text has been set in type may require an additional cost which exceeds the original. The galley proof is for correction of ERRORS, and a rewriting of the article should be done on the original copy BEFORE it is submitted for publication.

Drugs should be called by their generic names; the trade names can be added in parentheses if they are considered important. All *units of measure* must be given in the metric system.

References

Bibliographic references should not exceed 20 in number, documenting key publications. Personal communications and unpublished data should not be included. References should be arranged according to the order of citation, and not alphabetically. All references must be numbered consecutively and all must be cited in the text. Use the style of the AMA publications, giving; name of author, title of article, name of periodical, volume, pages, year.

Illustrations

All material which cannot be set in type, such as photographs, line drawings, graphs, charts, tracings (for preparation of tables, see below) must be mounted on white cardboard. All must be identified on the back as to figure number, author's name, and an arrow indicating top. Legends should be typed double spaced on a separate sheet of paper, limited to a maximum of 30 words.

Drawings and graphs should be done professionally in India ink on illustration board or high grade white drawing paper.

Photographic material should be submitted in duplicate as high-contrast, glossy prints. Color illustrations will be accepted for publication only if the author assumes the cost.

THE JOURNAL will assume the cost of B/W engravings and cuts up to $35 (or 5 cuts). Engraving cost for illustrations in excess of $35 will be billed to the author.

Tables

Because tables are set by hand, their cost is comparable to illustrations. A reasonable number of tables are allowed without cost to the author.

Tables should be self-explanatory and should supplement, not duplicate, the text. Since the purpose of a table is to compare or classify related items, the data must be logically and clearly organized. The relationship and comparison are established by the correct choice of column heads (captions of vertical columns)and stubs (left entries in horizontal listings).

Each table should be typed double spaced, including all headings, on separate sheets of lettersize paper. Oversize paper should not be used. Instead, repeat heads and stubs on a second sheet for tables requiring extra width. Number tables consecutively. Each table must have a title.

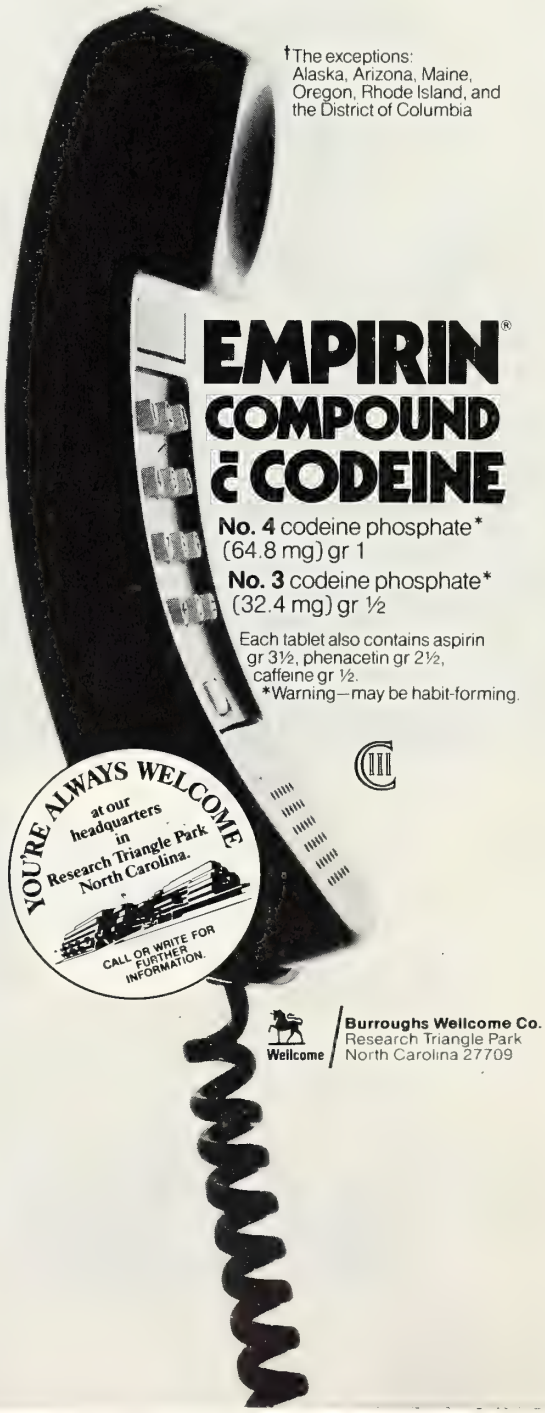
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A reprint order form with a table covering cost will be sent with the galley proof to each contributor. Since the JOURNAL has no way to provide for reprints, they must be ordered by the author and purchased directly from the printer.

The Pain Phone

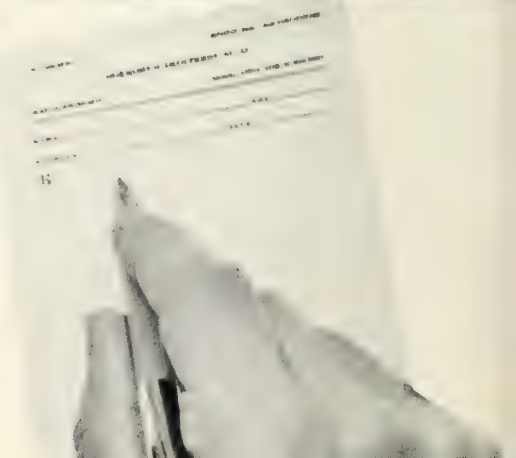
When a telephone prescription for pain relief is necessary or convenient, you can call in your order for Empirin Compound with Codeine in 45 of the 50 states† That includes No. 4, which provides a full grain of codeine for more intense, acute pain.

†The exceptions: Alaska, Arizona, Maine, Oregon, Rhode Island, and the District of Columbia





Bioequivalence



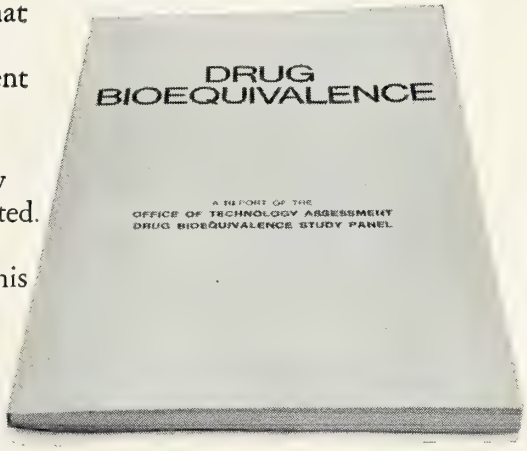
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and

(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or

(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

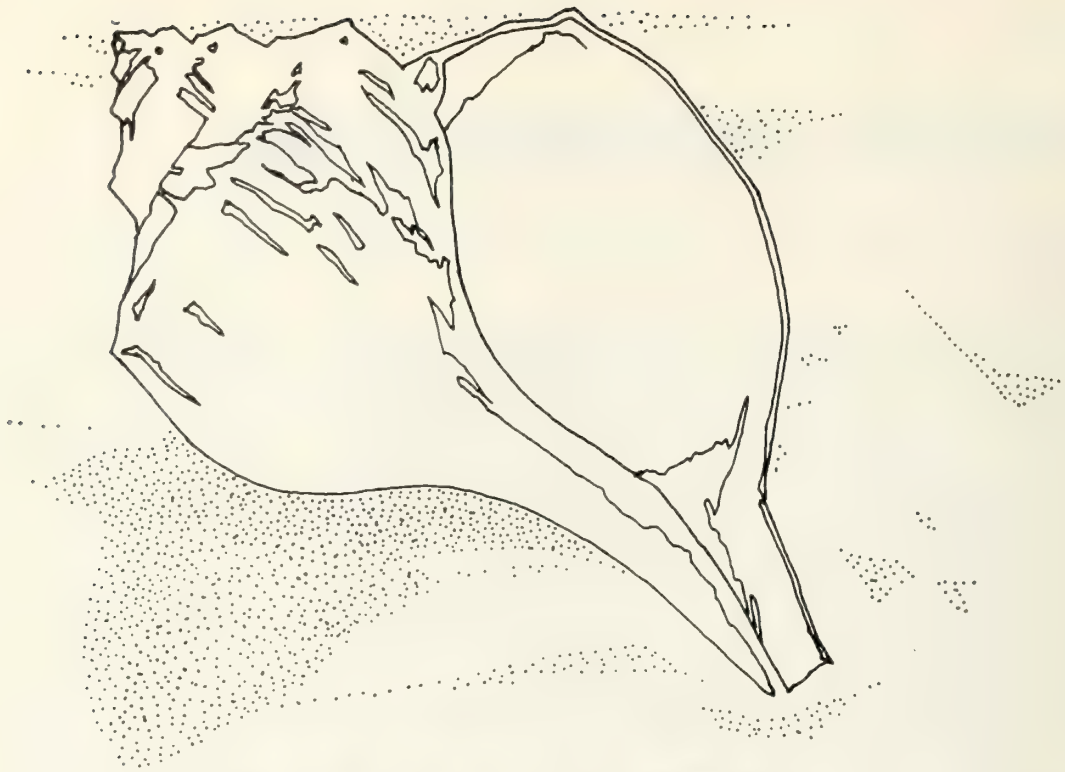
The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription



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49 Continuing Medical Education courses at AMA's Annual Convention, June 14-18, 1975 Atlantic City, New Jersey

Those 49 Category I Continuing Medical Education courses are the largest number ever offered at an AMA convention. On top of that, there'll be Category I symposia and medical motion pictures on a wide variety of specialties.

Also featured are a number of special interest programs: a two-day session on the Medical Aspects of Sports, a series of special courses on clinical pathology, and a joint program by the American Veterinary Medical Association and the AMA on diseases transmitted to man by household pets. Physicians' wives and families will be offered interesting programs co-sponsored by the AMA's Council on Scientific Assembly and the Woman's Auxiliary of the AMA.

For more information, write:
Dept. of Circulation & Records, AMA
535 N. Dearborn St., Chicago, IL 60610

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The Kansas Medical Society—1974-1975

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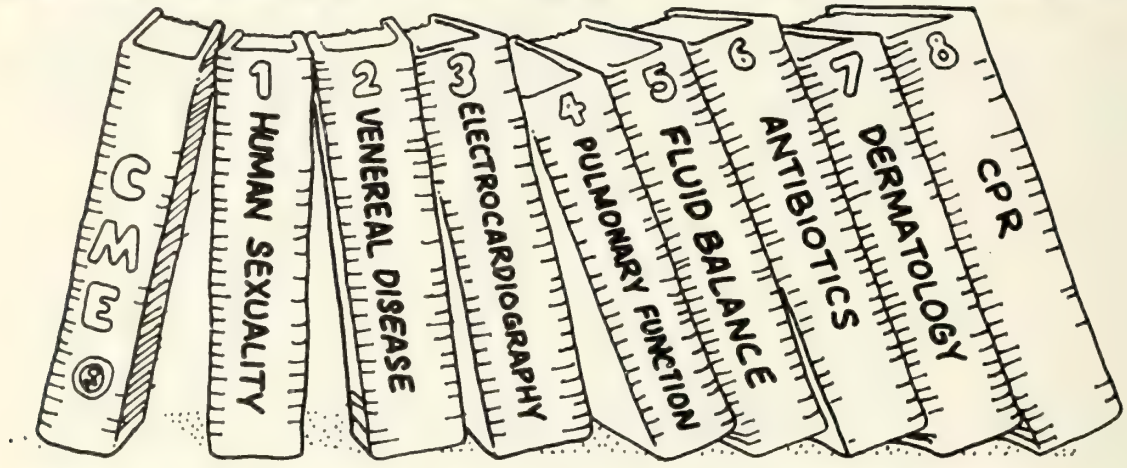
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*Courses 1 through 7 are 6 hours each; each is presented twice (once on Saturday, once on Sunday). Course No. 8 is a 12-hour course that runs both days.

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Month in Washington

Strict utilization review procedures for Medicare and Medicaid were ordered by the HEW Department. The final regulations tighten and standardize hospital and skilled nursing home admission and stay rules for federal program beneficiaries. They are designed to be applicable to all patients and to fit in with any future NHI program. The regulations are expected to have a great impact on all hospital and nursing home review operations.

The HEW Department said they are compatible with and supportive of HEW's Professional Standards Review Organization (PSRO) program, and will permit an orderly transition to the operation of the PSROs. While the nationwide PSRO program is one to two years away from full-scale operation, review under these new regulations can begin now in all facilities serving eligible individuals. The regulations implement provisions of the Social Security Amendments law approved by Congress in 1972.

A controversial feature of the earlier proposed regulations to require pre-admission certification was dropped from the final regulations.

The new requirements and the major changes in the final regulations, which modify conditions of participation by hospitals and skilled nursing facilities in Medicaid and Medicare programs, are:

Hospitals will be required to undertake concurrent admission review, rather than prior approval as first proposed. Approved length of stay will be based on patient's condition and diagnosis, and will be subject to extension, if medically justified.

Timely review of a patient's need for continued hospitalization according to criteria developed by the review committee, and retrospective review of the quality of care through medical care evaluation studies.

Composition of the utilization review committee has been changed to permit professional personnel employed by hospitals to be members.

In addition, under Medicaid, states will be required to establish utilization control programs which include provisions for: (1) physicians' certification at admission and every 60 days thereafter of a patient's need for institutional care; (2) development and review of a plan of care for each patient; and (3) on-site inspections to determine adequacy and quality of services.

Here is how HEW described hospital admission review rules for Medicare and Medicaid:

All patients admitted under Medicare or Medicaid are reviewed.

Review within one working day of admission and final determination made within two working days.

Review using criteria and standards developed by the utilization review committee.

Appropriate regional norms are used, where available, to assist in assigning a date for extended stay review.

Selected diagnosis/problems, practitioners, or institutions which present problems are reviewed in greater depth.

For hospital stay review, all patients still in the hospital on the date assigned at admission will be reviewed. They will be reviewed prior to or on date assigned at admission. A final determination is made within two working days of the end of the certified period. The review employs criteria and standards developed by the utilization review committee.

Purpose of required medical care evaluation studies "is to improve the quality of medical care and the efficiency of health care delivery," HEW said. The studies will be retrospective with in-depth reviews of known

Mark Your Calendar Today!

116th KMS ANNUAL SESSION

May 4-7, 1975 Glenwood Manor Overland Park

Please note: **House of Delegates First Session will convene May 4, Sunday, at 9:00 A.M.**

or suspected problem areas in medical care. The studies should identify specific needed changes, and lead to appropriate action programs to make such changes, *i.e,* programs of continuing education. Each institution must have at least one study in progress at any point in time, and must complete at least one study annually, HEW said.

The Supreme Court refused to block a lower court requirement that drug manufacturers warn parents during community-wide vaccination drives that vaccine might be harmful.

The American Medical Association, pediatricians, and epidemiologists had warned that parents' fears could hamper inoculation campaigns.

Manufacturers are required by the federal government to include warning pamphlets in drug shipments to pharmacists. There is no requirement to warn the patient.

The Supreme Court appeal was brought by Wyeth Laboratories, which manufactures a Sabin oral vaccine. The vaccine was used during a 1970 drive to combat a polio epidemic in Hidalgo County, Texas.

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The American Medical Association urged the Administration to explore with it the feasibility of legislation dealing with the malpractice liability of physicians in treating beneficiaries of federal programs.

In a message delivered to HEW Secretary Caspar Weinberger by AMA President Malcolm C. Todd, M.D., and Richard Palmer, M.D., Chairman of the AMA Board of Trustees, the Association declared that "what is needed is a swift system for paying deserving claims so that justice can be prompt. For both the physician accused of malpractice, who bears a severe emotional burden, and the patient who becomes an unfortunate plaintiff, justice delayed is justice denied."

The letter by Dr. Todd noted that in 1975, as much as 50 per cent of the cost of health care may be provided through government-sponsored plans and programs.

Dr. Todd said, at present it is estimated that after all costs of the tort system are met—fees to defense and plaintiff's attorneys—and witnesses, costs of investigation, insurance underwriting, etc., plaintiffs actually receive a net of only $1.00 out of every $6.00 paid in premiums for hospital and physician's liability insurance.

He pointed out that government health care programs now contribute a major part of the cost of a system which provides claimants with only 16 cents out of every dollar paid for malpractice insurance. The remainder goes for the services of plaintiff's and defense lawyers, investigators, witnesses, insurance carriers and brokers, and miscellaneous items of overhead, Dr. Todd noted.

"Any payments or awards made to claimants arising out of medical accidents should exclude medical costs which, in fact, were actually paid for by Medicare, Medicaid, etc. Under existing law, a successful malpractice claimant can recover for medical and hospital costs that have been paid or that will be paid in the future by Medicare, Medicaid. Such windfall payments which the government pays for directly or indirectly should cease," said Dr. Todd in the letter.

He urged "a conference at the earliest mutually convenient time between representatives of the AMA and HEW to discuss the feasibility of federal legislation which would deal with the concepts discussed."

The present crisis in the underwriting of professional liability insurance has become a key issue in the new Congress. The Senate Health Subcommittee has slated hearings starting in April. The House Health Subcommittee is expected to follow suit. Five major bills tackling the problem already have been introduced.

However, a ticklish jurisdictional problem has cropped

up, with no one sure yet which Congressional committee should have prime legislative responsibility. Technically, it would appear that the House and Senate Judiciary committees would have a strong claim because of the legal aspects of the problem. However, the Health subcommittees as well as House Ways and Means and Senate Finance also have an obvious stake.

Principal professional liability bills already introduced include:

*H.R. 1305, By Representative Marjorie Holt (R-Md.), to establish a Commission on Awards.

*H.R. 1378, By Chairman Dan Rostenkowski (D-Ill.) of the Ways and Means Health subcommittee, to provide for studies of the problem by the National Academy of Science's Institute of Medicine.

*S. 188, By Senator Gaylord Nelson (D-Wis.), to authorize HEW to set up a reinsurance program and to conduct studies and experiments.

*S. 482, By Senators Ted Kennedy and Daniel Inouye (D-Hawaii), for a no-fault plan eliminating contingency fees but subjecting physicians to strict supervision.

*S. 215, By the same Senators, to establish compulsory arbitration as an alternative to the above proposal.

The American Hospital Association has voted for the creation of a captive reinsurance company or comparable mechanism, to implement a national malpractice and general liability insurance program for hospitals and a "positive legislative program" to seek remedies. A one-time assessment of $4 per hospital bed would help start the plan, which would not be acted upon finally until a special meeting in May.

The AHA plan would provide first dollar coverage up to the limit of the policy purchased by the hospitals. It is expected that this policy would provide coverage for each and every malpractice occurrence of up to $15 million.

All employees of the hospital including house staff would be covered. Physicians under contractual compensation relationships would be included—emergency room contract physicians, anesthesiologists, radiologists, pathologists, etc.—for their professional activities within the hospital.

However, AHA said the insurers have advised that private practitioners cannot be included in this program at this time.

Rep. James Hastings (R-N.Y.), a member of the House Health Subcommittee, has announced that a national conference on medical malpractice insurance will take place in late March in Washington. The two-day conference was arranged by Hastings and the American Group Practice Association. Hastings said he believes the conference will be the first attempt "to examine the causes of the malpractice crisis and explore all alternatives so as to be able to develop a workable remedy which would protect both the doctor and his patient."

Among the scheduled speakers are Senator Edward Kennedy (D-Mass.), Chairman of the Senate Health Subcommittee; Chairman Paul Rogers (D-Fla.) of the House Health Subcommittee; and Roger Egeberg, M.D., Special Assistant to the Secretary (HEW) for Health Policy Affairs.

Ten patients and five physicians have joined the American Medical Association in legal action against new hospital utilization review regulations adopted by the Department of Health, Education and Welfare.

The action marks the first time the AMA has taken court action against the government. The suit, filed in Northern Illinois Federal District Court, seeks a preliminary injunction, on the grounds that the plaintiffs will be "irreparably injured" if the regulations are permitted to remain in force. Ultimately, a permanent injunction is requested.

The AMA and its co-plaintiffs contend that the utilization review regulations violate the constitutionally protected rights of patients to receive medical care in accordance with the best judgment of their doctors; violate the constitutionally protected rights of physicians to practice medicine; violate specific sections of the Medicare and Medicaid laws; exceed the authority granted to the Secretary of HEW; and were issued in a manner contrary to the procedures required by the Constitution and the Administrative Procedure Act.

The regulations became effective February 1, and hospitals have been given until April 1 to file with state agencies their plans for implementing the regulations. They require that every decision by a physician to hospitalize a Medicare or Medicaid patient be evaluated by a "utilization review committee" of the admitting hospital within one working day of the patient's admission.

The Committee may have members who are not physicians and may act through agents who are not physicians.

"This is the issue we are putting before the courts and before the American people," stated AMA President Malcolm C. Todd, M.D. "Is the decision that you need hospital care to be made by your doctor—who knows you—or by a physician who does not know you—or worse yet, by a non-physician.

"The issue is that simple," Dr. Todd said.

Congress has signaled for flank-speed on anti-reces-

sion legislation to provide health insurance to the unemployed. Hearings have been already slated by the Health Subcommittee of the House Ways and Means Committee. The Senate Health Subcommittee will also conduct hearings.

Major bills have been introduced in both House and Senate to ease the problems of the growing number of the out-of-work by helping them obtain private health insurance in those cases where it has lapsed because of unemployment.

The American Medical Association has proposed such assistance and urged the lawmakers to approve it.

The AMA bill contains the following concepts:

*Employers who provide health insurance for employees would be required to continue coverage for 30 days after an employee's termination.

*An unemployed person's working spouse would immediately be eligible to enroll in a health insurance plan, even if the plan was not open to enrollment otherwise.

*Other unemployed persons eligible for unemployment compensation would be continued in the plan at their last place of employment with premiums paid by the federal government from general revenues.

Despite loud barks to the contrary from Democrats of both House and Senate leadership, the chances of passage of any type of national health insurance (NHI) measure this year seem remote. And the odds at this time seem to suggest that NHI may have trouble the following year. The thinking seems to be that such landmark legislation is more likely to come about in the 95th Congress due to the ever-growing restraints on the present economy.

Nonetheless, the House Ways and Means Committee's new subcommittee on Health has named an advisory panel on NHI. The list numbers more than 100 names—with more to come—and draws heavily from academia.

According to Subcommittee Chairman Dan Rostenkowski (D-Ill.), "the advice of these experts, who will be meeting with the Subcommittee during the coming months, should be of great assistance as we try to better understand our complex health care system and how NHI can improve it."

Present plans are to study updated legislative recommendations of interested groups through April 15, and then hold few, if any, public hearings on NHI before tackling the job of framing a bill.

The advisory group was said to "contain no members who are officials of national organizations or groups that have espoused specific approaches to NHI." The members "know something that the Subcommittee should learn about and were not chosen to represent organized interests," said Rostenkowski.

Several ex-federal health officers were named, including: Wilbur Cohen, former HEW Secretary; Philip Lee, M.D., and Merlin Duval, M.D., former Assistant HEW Secretaries for Health; John Veneman, once HEW Undersecretary; former Social Security Commissioner Robert Ball, and a former Social Security actuary, Robert Myers.

Nominating Committee

The Nominating Committee of the Kansas Medical Society met on Thursday, January 23, 1975, and submits to the House of Delegates the following list of nominations for the elective offices of the Society. Wherever more than one nomination appear, these are presented in alphabetical order. A very brief biography accompanies each name.

President-Elect

Emerson D. Yoder, M.D., Denton. Born in 1914. Graduated from the University of Kansas School of Medicine in 1949. Has served as Constitutional Secretary.

First Vice-President

John D. Huff, M.D., Kansas City. Born in 1921. Graduated from the University of Kansas School of Medicine in 1952. Is past president of the Kansas Academy of Family Practice. Has served as Councilor.

Second Vice-President

Richard M. Glover, M.D., Newton. Born in 1921. Graduated from the University of Kansas School of Medicine in 1953. Is currently serving as Councilor.

Chester M. Lessenden, M.D., Topeka. Born in 1918. Graduated from the University of Kansas School of Medicine in 1943. Is past chairman of the Kansas Dermatology Society. Has served as Treasurer.

Warren E. Meyer, M.D., Wichita. Born in 1927. Graduated from the Northwestern University School of Medicine in 1951. Is currently serving as Councilor.

Constitutional Secretary

Phillip A. Godwin, M.D., Lawrence. Born in 1928. Graduated from the University of Kansas School of Medicine in 1955. Is currently serving as Constitutional Secretary.

Treasurer

Edward G. Campbell, M.D., Emporia. Born in 1931. Graduated from the University of Kansas School of Medicine in 1961. Is currently serving as Treasurer.

AMA Delegate

Clair C. Conard, M.D., Dodge City. Born in 1927. Graduated from the University of Kansas School of Medicine in 1955. Is currently serving as Speaker of the House of Delegates, and AMA Delegate.

Kenneth L. Graham, M.D., Leavenworth. Born in 1921. Graduated from the Ohio State University School of Medicine in 1945. Has served as President.

AMA Alternate

Lew W. Purinton, M.D., Wichita. Born in 1923. Graduated from the University of Kansas School of Medicine in 1948. Is currently serving as AMA Alternate.

Kermit G. Wedel, M.D., Minneapolis. Born in 1932. Graduated from the University of Kansas School of Medicine in 1960. Is currently serving as Councilor.

ACTIVE PHYSICIANS IN KANSAS*

Doctors of Medicine
January 1974

Specialty	GOVERNMENTAL EMPLOYMENT			TRAINING PROGRAMS				
	Federal	*State*	*City County*	*Faculty*[a]	*House Staff*	*Private Practice*	*Total*	
General Practice	16	16	3	0	0	568	603	(109)[b]
Family Practice	2	0	0	4	36	42	84	(0)
Internal Medicine	47	5	3	16	72	225	368	(23)
Pediatrics	12	8	0	20	18	74	132	(7)
Total Primary Care	77	29	6	40	126	909	1,187	(139)
Internal Medicine Specialties	3	1	0	18	27	43	92	(10)
Neurology	3	1	0	3	6	16	29	(1)
Dermatology	2	0	0	1	0	21	24	(2)
Allergy	0	0	0	0	0	13	13	(1)
Pediatric Specialties	0	0	0	2	4	7	13	(1)
Psychiatry	35	49	4	13	82	140	323	(8)
General Surgery	33	3	0	5	40	159	240	(23)
Surgical Specialties	1	0	0	12	10	32	55	(2)
Obstetrics-Gynecology	11	0	0	8	17	97	133	(9)
Orthopedic Surgery	11	0	0	2	19	64	96	(6)
Urology	5	1	0	3	8	36	52	(3)
Otolaryngology	2	0	0	3	6	37	48	(2)
Ophthalmology	6	0	0	3	8	71	88	(10)
Pathology	15	1	1	14	26	57	114	(3)
Radiology	8	0	1	10	26	89	134	(4)
Anesthesiology	6	1	0	8	16	73	104	(10)
Physical Medicine	2	1	0	2	4	0	9	(0)
Other Specialties and Classifications	19	8	3	10	28	56	125	(21)
Grand Total	239	95	15	157	453	1,920	2,879	(255)

[a] University of Kansas School of Medicine.
[b] Doctors of Medicine currently age 65 or over.
* From a study conducted by the Kansas Regional Medical Program.

CME ACCREDITATION PROGRAM NOW UNDERWAY

The Continuing Medical Education Committee of the Kansas Medical Society is now actively surveying institutions and organizations for accreditation of their continuing medical education programs.

As stated in Resolution No. 73-15, the Accreditation Committee feels that the following areas are important aspects of institutional commitment to improving patient care through continuing medical education:

a) Explicit support of continuing medical education by the governing body, organized medical staff, and administration;

b) Provision of facilities for continuing medical education of the attending staff as evidence of such support;

c) A continuing medical education department or committee having cross-membership with patient-care review committees and including a wide range of subspecialty and departmental representation;

d) A responsible director of continuing education or continuing education committee chairman with supporting staff, including availability and use of expert knowledge of educational methods, wherever possible;

e) Coordination and cooperation with other education programs in the area, in sharing resources and evidence of efforts to meet the educational needs of physicians in the community.

At an accreditation survey the following areas are reviewed:

1. Administration of the program;
2. Adequacy of program budget;
3. Composition of the teaching staff;
4. Format, organization, and content of the curriculum;
5. Available facilities;
6. Educational methods;
7. Methods of evaluation.

The Committee is primarily interested in accrediting a *continuous* program of continuing medical education, rather than a single program put on once a year.

For the smaller hospitals under 50 beds, the Committee has suggested the formation of an association or consortium of hospitals in a region for the purpose of continuing medical education with consultation from the larger near-by cities. The local program is really the important basic thing. Specific questions on the formation of an association should be directed to Dr. Jesse D. Rising, through the offices of the Kansas Medical Society.

The Committee on Continuing Medical Education would like to emphasize that accreditation is not as complicated as it seems, and would encourage all institutions and organizations to apply for an accreditation survey. Requests for a survey should be directed to:

Mr. Gary Caruthers, *Executive Assistant*
The Kansas Medical Society
1300 Topeka Avenue
Topeka, Kansas 66612

POSTGRADUATE EDUCATION REQUIREMENT

This notice is due to the many requests for information on how and what to do about recording courses and hours of continuing medical education for the 150-hour requirement for continued membership in the Kansas Medical Society.

The Physician Proficiency Committee, of which Dr. Warren J. Jacks, Pratt, is Chairman, is currently studying the issue and will be responsible for developing guidelines and establishing procedures and forms for reporting credits.

Please keep track of your own continuing medical education credits and do not submit them to the Kansas Medical Society office until further notice from the Committee.

THE 1975 ROSTER

THE 1975 MEMBERSHIP DIRECTORY WILL APPEAR IN THE AUGUST ISSUE OF THE JOURNAL. IN ORDER TO HAVE YOUR ADDRESS LISTED CORRECTLY, PLEASE CLIP AND SEND TO THE KMS EXECUTIVE OFFICE THE COUPON APPEARING BELOW. IF NO NEW INFORMATION IS RECEIVED FROM YOU, THE LISTING WILL APPEAR AS IN THE PREVIOUS DIRECTORY.

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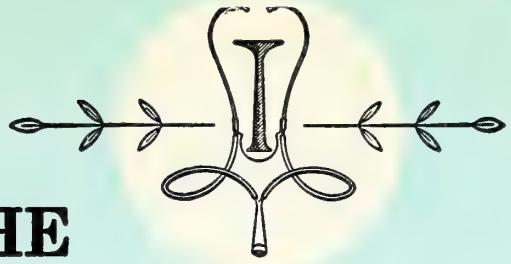
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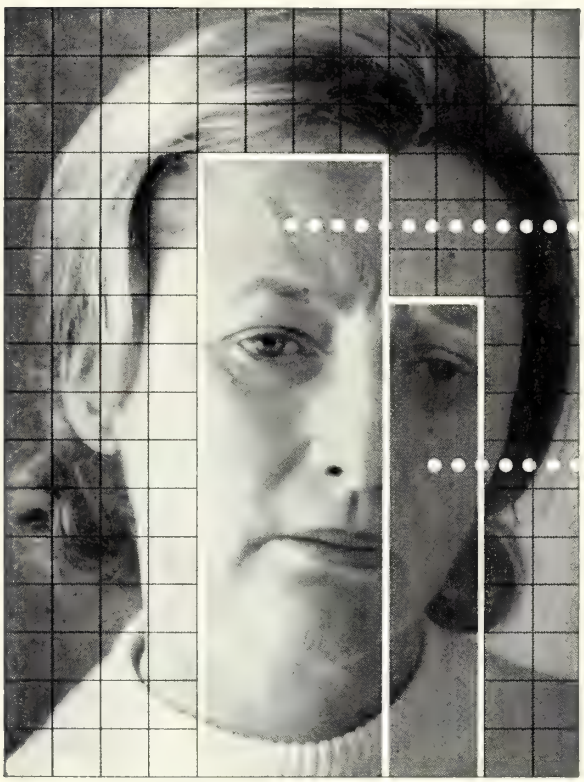
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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

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Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Volume LXXVI, Number 4—April, 1975

The JOURNAL of the KANSAS MEDICAL SOCIETY

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Sunday, May 4

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Hospitality Room
Convention Center Lobby

6:15 **Cocktails, Dinner, Show:** *"See How They Run,"* Tiffany's Attic Dinner Playhouse
(Reservations through KMS Office)

Monday, May 5

8:30-4:00 Registration—Reservations
Hospitality Room
Convention Center Lobby

7:30-9:15 **"Early Bird" Breakfast**
Medical Society and Auxiliary
Glenwood Convention Center
W. J. Lewis, M.D., Immediate Past Chairman, AMPAC

9:30 **Pre-Convention Board of Directors Meeting**
Magnifique Suite
Mrs. W. E. Meyer, President Woman's Auxiliary to KMS Presiding

12:30 **Luncheon—Honoring Past State Presidents and State Officers**
Top of the Crown, Crown Center
Celebration of the 50th Anniversary of the Woman's Auxiliary to the KMS

6:00 **Ladies' Night, Dinner**
The Imperial Palace (1215 W. 103rd St.)
Entertainment: Nelson-Atkins Museum of Fine Arts

Tuesday, May 6

7:30 **Past State Presidents Breakfast Buffet**
Emerald Room

8:30-4:00 Registration—Reservations
Hospitality Room
Convention Center Lobby

9:00-12:00 **General Session**
Convention Center Lobby

12:30 **Social Hour and Luncheon—Honoring Mrs. Erle E. Wilkinson, President-Elect, Woman's Auxiliary to the AMA**
Brookridge Country Club
(8223 W. 103rd St., Overland Park)

2:30-5:00 **Tour of Chinese Exhibit**
Nelson Gallery

5:30 **K.U. Medical Alumni Reception**
Glenwood Convention Center

7:00 **President's Banquet—Kansas Medical Society**
Glenwood Convention Center
Mrs. Jane Bauman, Speaker

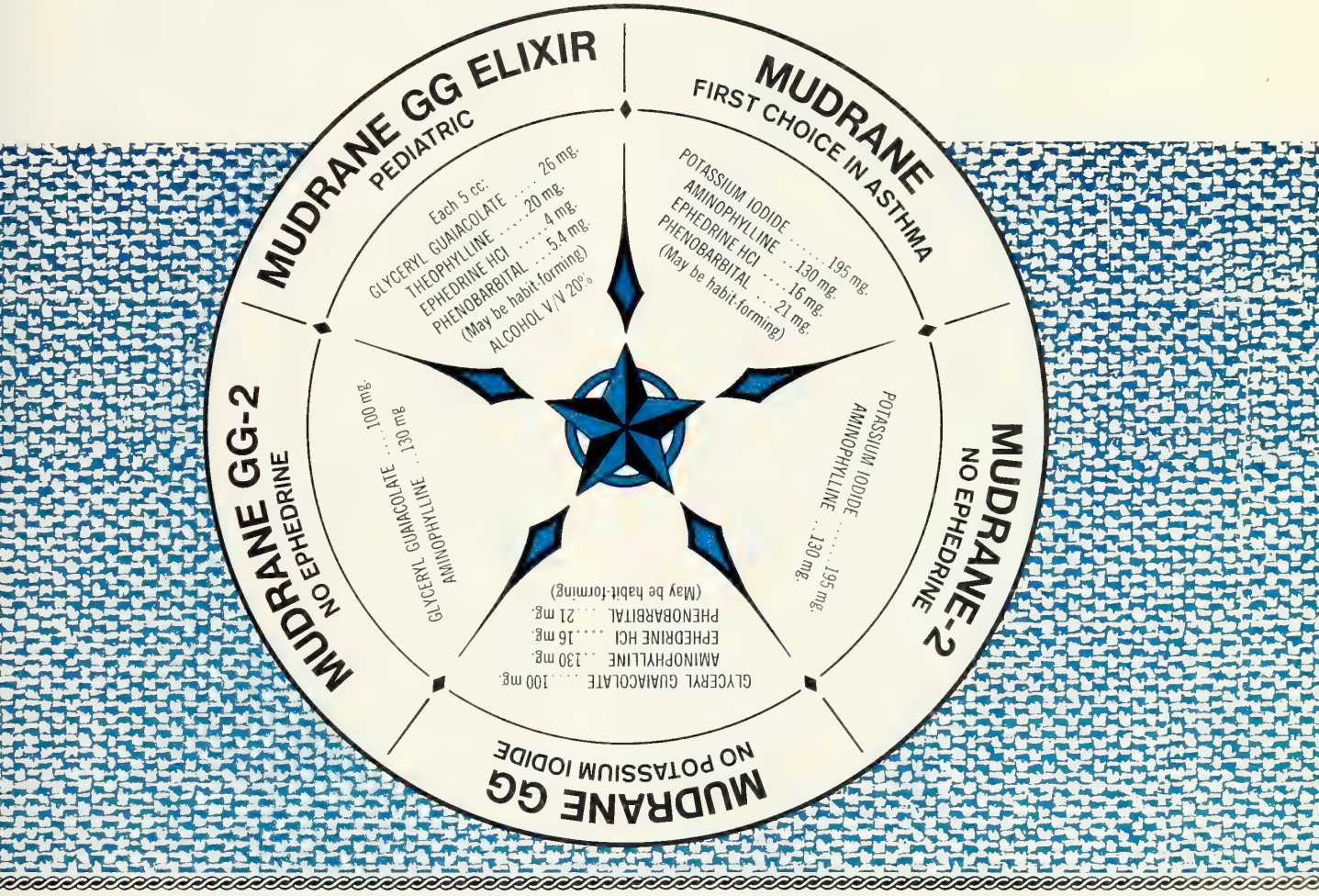
Wednesday, May 7

8:30-10:30 Registration—Reservations
Hospitality Room
Convention Center Lobby

9:00 **Post-Convention Board of Directors Meeting**
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RESULTS OF SURVEY ON PROFESSIONAL LIABILITY

In the fall of 1974, the Kansas Medical Society membership was asked to respond to a survey on professional liability developed by the KMS Malpractice Committee, which is chaired by Gregg M. Snyder, M.D., a Wichita neurosurgeon.

Slightly over 2,000 surveys were mailed and to date 1,027 responses have been received, representing a 50 per cent sample of the entire KMS membership *(Table I)*. The survey asked for claims information, type of practice of the respondent, effect of malpractice problems on method of practice, insurance information, and suggestions on ways to improve existing conditions. Of those responding to the survey, 25 per cent indicated that there existed a professional liability problem in their county at the present time. This figure, in addition to the large number of physicians who returned surveys, indicates much interest and concern for the growing professional liability problem in Kansas. The following data was collected from the 1,027 responses:

The respondents exhibited the following types of practice:

solo practitioners	45%
single discipline group	25%
multidiscipline group	20%
fulltime geographic academic	5%
fulltime salary only	4%
administration and military	1%

There were 288 respondents who reported having at least one claim brought against them; 202 respondents had experienced only one claim; 84 reported having two to four claims; and 2 physicians indicated they had had five or more claims brought against them. A total of 352 claims were reported, and 61 per cent (217) of those had been filed in the four years since 1970. The remaining 39 per cent (135 claims) reported had been brought in the twelve years prior to 1970 *(Table I)*. The figures indicate that the number of claims filed has increased significantly in the past four or five years.

The results of those claims that eventually became suits filed in court (174 physicians, or 60 per cent, of those having at least one claim had a suit filed against them) were inconclusive due to the number of incomplete responses, but generally: (1) in about 20 per cent of the suits, the physician was named a codefendant with a hospital; (2) the claim most often arose as a result of a surgical procedure; (3) more disputes were decided out of court than in the courtroom; (4) one half of the settlements or awards were for under $5,000 *(Table II)*; (5) the large majority of claims were based on alleged negligence; and (6) about one third of the physicians sued felt the lawyer stimulated the patient to sue.

TABLE I

	A	*B*
General and family practice	359	99
General surgery	99	48
Internal medicine	91	16
Ob-Gyn	66	38
Psychiatry	55	7
Pediatrics	47	8
Ophthalmology	44	6
Radiology	40	10
Orthopedics	39	20
Anesthesiology	33	8
Pathology	24	1
Urology	22	6
Dermatology	15	1
Otolaryngology	15	4
Allergy	12	3
Plastic surgery	11	3
Neurology	9	4
Neurosurgery	9	4
Gastroenterology	5	1
All other specialties	32	1
Totals	1027	288

A. Specialty of physicians responding to survey.
B. Number of respondents having experienced at least one claim against them (by specialty).

Eighty-two physicians, or 8 per cent of the respondents, indicated they had appeared as an expert witness in a malpractice case at least once.

Nearly eight of ten physicians responding showed that problems associated with professional liability had affected the manner in which they practiced medicine. About 60 per cent of the respondents (607) indicated

TABLE II

AMOUNT OF SETTLEMENT OR AWARD OF REPORTED CLAIMS*

	No. of Claims	*% of Total*
Under $5,000	62	50
$5,000-$9,999	26	21
$10,000-$49,999	26	21
$50,000-$99,999	5	4
$100,000-$499,000	5	4
Over $500,000	0	0
	124	100

* Only 124 of the respondents who reported claims completed this question. Two respondents did not know the amount of their settlement.

they were using more x-ray in their practice. In contrast, 14 per cent of the respondents (139) said their method of practice had been unchanged by the problems associated with professional liability *(Table III)*.

Almost one third of the respondents had premium increases of between 50 to 100 per cent in the past three years. In addition, many indicated their premiums were to increase significantly in 1975, and 24 per cent (246) had increased the limit of their professional liability coverage in the past three years. A very small number of physicians reported premium increases in excess of 300 per cent over the past three years.

A total of 70 physicians, 6.8 per cent of the sample, had their coverage cancelled or not renewed, but it was not possible to determine how many of those were without coverage at the present. Approximately 10 per cent (101) of the respondents had changed insurance carriers within the past three years.

Of the 1,027 responses, 729 answered a question asking for the name of their present insurance carrier. The Medical Protective Company insured 363 (50%) of those responding; The St. Paul Fire & Marine insured 207 (28%); Aetna carried 50 (7%); and the rest of the coverage was spread over several companies including Hartford, USF&G, Travelers, Lloyds of London, Gulf, Western Casualty, CNA, and the Atlantic.

The final question on the survey asked if there was interest in a state wide group insurance plan. A total of 796 (78%) of those responding indicated interest in such a plan. Slightly fewer than 48 (5%) respondents said they had no interest in a group plan. Another 48 were possibly in favor of the concept pending further study of the plan offered. The question was not answered by 114 respondents (11%).

Several physicians offered suggestions on ways to improve the existing malpractice situation. Most of the ideas asked for some sort of legislative relief such as binding arbitration, a reduction in the statute of limitations discovery period, and maximum award limits, to name a few. Other suggestions included the formation of a physician-owned insurance company, the establishment of a patient's medical injury compensation type of insurance, a change in the present contingency fee system, and the implementation of physician peer review panels.

TABLE III

EFFECT OF PROFESSIONAL LIABILITY PROBLEMS ON METHOD OF PRACTICE OF RESPONDENTS

	Number	*% of Total*
Use more x-ray	607	60
Use more care in writing records	569	56
Order more lab services	545	54
Use consultants more	525	52
Hospitalize patients for services formerly performed on an outpatient basis	271	27
Delegate less responsibility	262	26
Limited practice	234	23
Changed method of securing consent to operate	218	21
Method of practice the same	139	14

While some of the results of this survey were inconclusive, and despite a lack of information on court trials, appeals, settlements, etc., it is apparent that the professional liability problems of today do affect Kansas physicians. The overwhelming response in favor of examining and implementing a stable group insurance plan in Kansas in itself indicates that alternatives to the current system need to be explored in order that positive steps may be taken to alleviate this rapidly growing problem.—*J.S.*



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9:00 First Session

WEDNESDAY–MAY 7

Glenwood Hall

7:30 Registration of Delegates

8:00 Second Session

Council Meeting and Luncheon at Conclusion of House of Delegates–Renaissance Suite

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Reference Committees

SUNDAY, MAY 4, 2:00 P.M.

Committee A–Glenwood Hall

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Committee B–Glenwood Hall

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References: 1. Reuter, S.H., and Montgomery, W.W.: Arch. Otolaryng. *80*:214-217 (Aug.) 1964. **2.** Osol, A., et al., ed.: The United States Dispensatory and Physicians' Pharmacology, ed. 26, Philadelphia, J.B. Lippincott Co., 1967, p. 171. **3.** Schwartz, A.D., and Pearson, H.A.: J. Pediat. *78*:558-560 (March) 1971.

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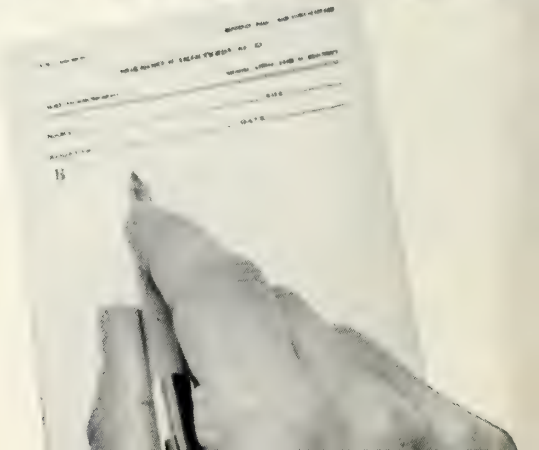
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Bioequivalence



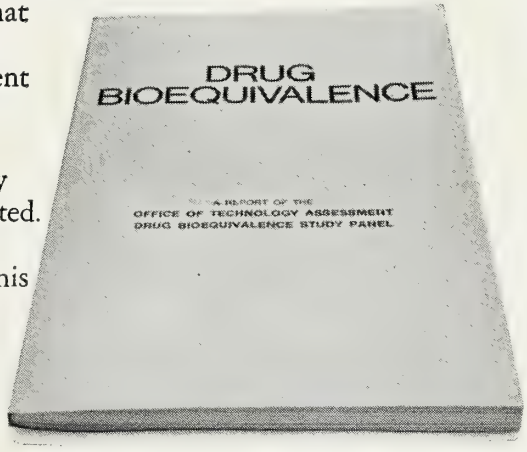
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and

(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or

(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

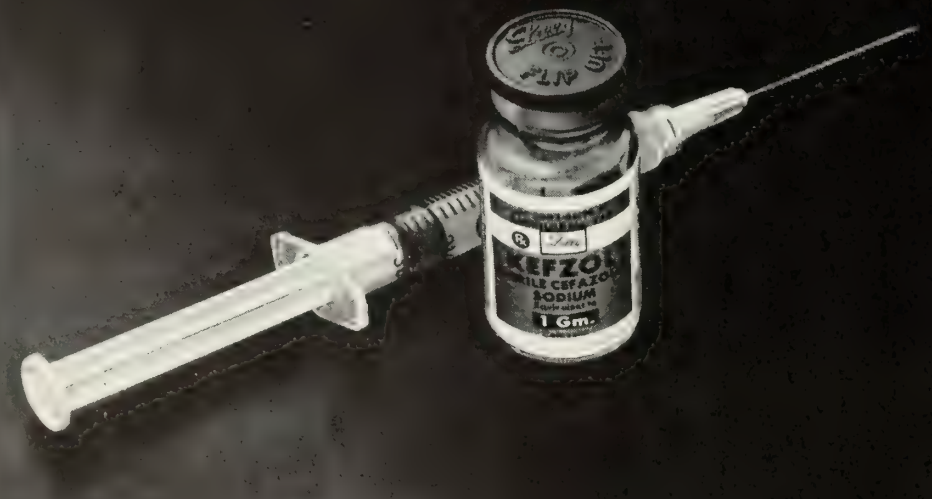
P·M·A
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription

Kefzol®
cefazolin sodium

Ampoules, equivalent to 1 Gm. of cefazolin



Lilly

Additional information available to the profession on request.

Eli Lilly and Company
Indianapolis, Indiana 46206
400380

Welcome to Overland Park

The physicians in Johnson County warmly welcome our colleagues throughout the state of Kansas to Johnson County for the Kansas Medical Society Annual Meeting.

There is a traditional Welsh couplet:

DEUWCH PAN FYNOCH,
CROESO PAN DELOCH.

(Come when you can, and welcome when you arrive!)

Drs. George Maser, John E. Johnson and Henry Sullivan, and Mrs. James Bridgens and Mrs. Stewart Hiatt have worked conscientiously with the Kansas Medical Society Executive Staff to work out the details for local arrangements. Their efforts are much appreciated.

Welcome to Greater Kansas City, and have a good time!

H. Ivor Jones, M.D., President

Johnson County Medical Society

Distinguished Speakers

FREDERIC SPEER, M.D.



Dr. Speer, a native Kansan, was graduated from the University of Kansas School of Medicine in 1934. Dr. Speer is in private practice of Allergy, in Mission. He holds the following appointments: Clinical Professor of Pediatrics, University of Kansas; Clinical Associate Professor of Pediatrics, University of Missouri at Columbia; Lecturer in Medicine, University of Missouri at Kansas City; Director of Training Program in Pediatric Allergy, University of Kansas at Kansas City, and the Children's Mercy Hospital at Kansas City, Missouri.

Dr. Speer's topic will be Allergy to Insect Stings.

JOSEPH S. REDDING, M.D.



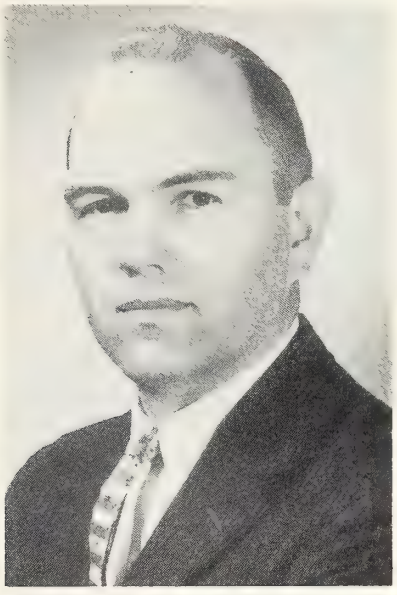
Born in Georgia, Dr. Redding received his M.D. degree from the University of Maryland School of Medicine, in 1948. He served his internship at the Rex Hospital, Raleigh, North Carolina. He is a Diplomate on the American Board of Anesthesiology, and holds the following appointments to the Medical University of South Carolina: Professor of Anesthesiology and Head of the Section on Respiratory Therapy, College of Medicine; Professor of Respiratory Therapy and Medical Director of the Respiratory Therapy Program, College of Allied Health Sciences. He is also the consultant in Respiratory Care, Charleston V.A. Hospital.

Dr. Redding will speak on the Drowning or Near-Drowning Victim.

VERNON A. GREEN, Ph.D.

Born in Oklahoma, Dr. Green was graduated from the University of Texas, in 1960. He is currently Professor of Pharmacology, School of Dentistry, University of Missouri at Kansas City, Kansas, and also serves as Clinical Toxicologist, The Children's Mercy Hospital at Kansas City, Missouri. He has taught pharmacology at the Ohio Northern University, the University of Texas, and the University of Oklahoma.

Dr. Green will speak on Poisonous Plants and Pesticides.



TOBIAS BROCHER, M.D.

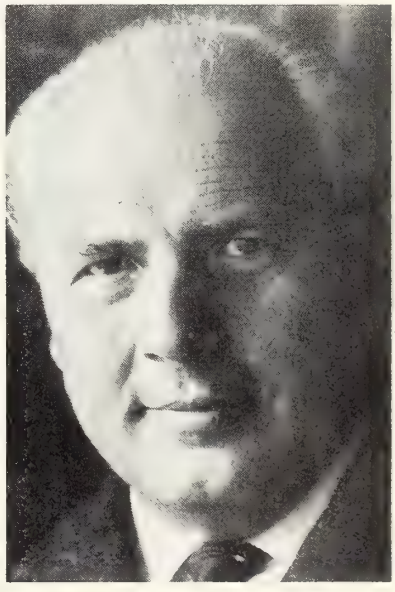
Dr. Brocher was born in Danzig, Germany. He received his M.D. degree from the University of Berlin Medical School, in 1942. He has been Professor of Social Sciences and Psychoanalysis of the Philosophical Behavioral Sciences Faculty at the Justus Liebig University, Giessen, Germany. He is currently the Distinguished Professor of Applied Behavioral Sciences and the Director of the Center for Applied Behavioral Sciences, the Menninger Foundation, Topeka. Dr. Brocher is certified by the Psychiatric Board Examination of Germany. His professional and research interests lie in the fields of child development, parent education, group dynamics, organizational intervention, and general education on TV.



LYNN O. LITTON, M.D.

A native Kansan, Dr. Litton was graduated from the University of Kansas School of Medicine, in 1946. He served his internship in the Milwaukee County Hospital. Dr. Litton is currently Professor and Head, Section of Orthopedic Surgery, University of Missouri, and holds appointments to the Boone County Hospital and Columbia Regional Hospital as the Attending Physician.

Dr. Litton's subject will concern the Ligamentous Injuries of the Ankle Joint.



Hosts for the Meeting

Johnson County Physicians Arranging 1975 Session

GENERAL CHAIRMAN—George R. Maser, M.D.

PROGRAM COMMITTEE

John E. Johnson, M.D., Chairman
Larry L. Calkins, M.D., Co-Chairman

SPORTS DAY

Henry B. Sullivan, Jr., M.D.

Sunday, May 4, 1975

Glenwood Manor Motor Hotel

7:30 REGISTRATION—TICKETS—INFORMATION
Glenwood Hall

7:30 KANSAS FOUNDATION FOR MEDICAL CARE BOARD OF DIRECTORS MEETING
Renaissance Suite

9:00 HOUSE OF DELEGATES—FIRST SESSION
Glenwood Hall

Clair C. Conard, M.D., Dodge City
Speaker

M. Robert Knapp, M.D., Wichita
Vice Speaker

12:00 KANSAS SOCIETY OF ANESTHESIOLOGISTS
Luncheon-Meeting
Renaissance Suite

12:30 DELEGATES' LUNCHEON
Glenwood Convention Center

2:00 REFERENCE COMMITTEE A
Glenwood Hall

J. Gilleran Kendrick, M.D., Wichita, *Chairman*
Michael R. Deitz, M.D., Kansas City
Donald D. Goering, M.D., Salina
Milburn W. Hobson, M.D., Shawnee Mission
Ramon W. Schmidt, M.D., Garden City

6:15 DINNER-THEATRE: *"See How They Run"*
Tiffany's Attic Dinner Playhouse
(5028 Main, Kansas City, Missouri)

VISIT THE EXHIBITS—REGISTER FOR DRAWING

A COFFEE LOUNGE WILL BE OPEN IN THE EXHIBIT AREA THROUGHOUT THE CONVENTION

TELEPHONE NUMBER **(913) 649-7000**

Monday, May 5, 1975

Glenwood Manor

MORNING

7:30 Registration—Tickets—Information
Glenwood Hall

7:30 **"Early Bird" Breakfast**
With the Woman's Auxiliary to KMS
Glenwood Convention Center
W. J. Lewis, M.D., Immediate Past Chairman, AMPAC

9:00 Reference Committee B
Glenwood Hall

Arthur C. Cherry, M.D., Topeka, *Chairman*
Dan L. Berger, M.D., Shawnee Mission
Richard L. Brownrigg, M.D., Dodge City
Joseph K. Robertson, M.D., Wichita
Alex Scott, M.D., Junction City

VISIT THE EXHIBITS—REGISTER FOR DRAWING

A COFFEE LOUNGE WILL BE OPEN IN THE EXHIBIT AREA THROUGHOUT THE CONVENTION

SPORTS DAY ACTIVITIES

Kansas Medical Society Golf, Skeet and Trap Association
Henry B. Sullivan, Jr., M.D., Shawnee Mission, President

10:30 Golfing—Leawood South Country Club (12701 High Drive, Leawood. Ph: 913-381-9888)

1:00 Trap Shoot—Kansas Field and Gun Dog Club (7 and 10 Gun Club) (83rd at Monticello Rd.)

6:30 Cocktails
Leawood South Country Club

7:30 Dinner
Leawood South Country Club

TELEPHONE NUMBER ..... **(913) 649-7000**

Glenwood Manor

MORNING

7:30 Registration—Tickets—Information
Glenwood Hall

7:30 Past Presidents' Breakfast
Flamenco Suite

7:30 **Specialty Societies**—Breakfast and Business Meetings

Kansas Coroners Association
Barcelona Suite
Kansas Obstetrical and Gynecological Society
Mediterranean Suite
Kansas Urological Society
Renaissance Suite

FIRST GENERAL SESSION

Glenwood Hall

John E. Johnson, M.D., Kansas City, Kansas, Moderator

9:00 Welcome
H. Ivor Jones, M.D., President
Johnson County Medical Society
Response
John N. Blank, M.D., President
The Kansas Medical Society

9:10 Common Summer Allergies
Frederic Speer, M.D., Director
Training Program in Pediatric Allergy
Children's Mercy Hospital
Kansas City, Missouri

9:35 Snake Bites
Lenly T. Hopkins, M.D.
Practicing Physician
Overland Park

10:00 Summer Trauma
Ben M. Kozikowsky, M.D.
Practicing Physician
Prairie Village

10:25 Intermission to View Exhibits

10:45 The Near-Drowning Victim
Joseph S. Redding, M.D.
Professor and Head
Section on Respiratory Therapy
Medical University of South Carolina
Charleston, South Carolina

11:40 Panel Discussion

12:00 General Luncheon
Glenwood Convention Center
Tobias Brocher, M.D.
Distinguished Professor
Applied Behavioral Sciences
The Menninger Foundation
Topeka

George R. Maser, M.D.
Presiding

May 6, 1975

SECOND GENERAL SESSION

Glenwood Hall

John E. Johnson, M.D., Kansas City, Kansas, Moderator

2:00 HEAT STROKE
Douglas Bogart, M.D.
Resident Physician
Department of Medicine, K.U.M.C.
Kansas City, Kansas

2:30 TOXIC PLANTS, HERBICIDES AND PESTICIDES
Vernon A. Green, Ph.D.
Chief of Toxicology
Children's Mercy Hospital
Kansas City, Missouri

3:00 TENDONITIS
Lynn O. Litton, M.D.
Professor and Chief
Orthopedic Surgery
University of Missouri School of Medicine
Columbia, Missouri

3:30 INTERMISSION TO VIEW EXHIBITS

4:00 SUMMER SKIN PROBLEMS
Edward S. Schotland, M.D.
Practicing Physician
Kansas City, Kansas

4:30 PANEL DISCUSSION

VISIT THE EXHIBITS—REGISTER FOR DRAWING

A COFFEE LOUNGE WILL BE OPEN IN THE EXHIBIT AREA THROUGHOUT THE CONVENTION

TELEPHONE NUMBER ..... **(913) 649-7000**

Tuesday, May 6, 1975

Glenwood Manor

EVENING

Annual President's Banquet—Kansas Medical Society

5:30 Reception for Physicians and Wives
Glenwood Convention Center
Sponsored by K.U. Medical Alumni Association

7:00 Dinner
Glenwood Convention Center
John N. Blank, M.D.
Presiding

Introduction of Guests
Oath of Office to Incoming President
Mrs. Jane Bauman

President and President-Elect



John N. Blank, M.D.
Hutchinson



John W. Travis, M.D.
Topeka

KMS ANNUAL MEETING PRESIDENT'S BANQUET MAY 6, 1975

MRS. JANE BAUMAN, Banquet Speaker

Mrs. Bauman is a farm columnist for *The Hutchinson News*. She has won 13 first-place awards in the National and State Federation of Press Women.

A native Kansan, Mrs. Bauman attended the University of Maryland and graduated from the IBM College, Endicott, New York. She presently farms 1,800 acres in Reno County, raising wheat, milo, alfalfa, and cattle. Besides writing her regular newspaper column, she gives public appearances on the topic of "The Joys of Farm Living."



Dr. and Mrs. John N. Blank extend a personal invitation to members of the Society and their guests to attend the President's Banquet on Tuesday evening, May 6, 1975.

Wednesday, May 7, 1975

Glenwood Manor

MORNING

7:30 REGISTRATION—INFORMATION
Glenwood Hall

8:00 **HOUSE OF DELEGATES—SECOND SESSION**
Glenwood Hall

1:00 **COUNCIL LUNCHEON AND MEETING**
Renaissance Suite

SEMINAR ON GYNECOLOGIC ONCOLOGY

The Kansas Society of Pathologists, in co-sponsorship with the Kansas Obstetrical and Gynecological Society, Invites All Members of the Sponsoring Societies to Attend the Following Program:

SPEAKERS:

M. R. Avell, M.D., Professor of Pathology,
University of Michigan School of Medicine
Ann Arbor, Michigan

J. R. Gosling, M.D.,
Associate Professor of Ob-Gyn
University of Michigan School of Medicine
Ann Arbor, Michigan

Slide Sets Can Be Ordered From:
David S. Jacobs, M.D.
Department of Pathology
Providence Hospital
1818 Tauromee Avenue
Kansas City, Kansas 66102

TELEPHONE NUMBER **(913) 649-7000**

Exhibits

The exhibits, located in Crystal Room, Glenwood Manor, will be open Sunday, 12:30 p.m. to 4:00 p.m.; Monday, 7:30 a.m. to 1:00 p.m.; and Tuesday, 7:30 a.m. to 5:00 p.m.

Register at the exhibit booths for drawings to be held at the dinner on Tuesday evening.

Booth No.	
4	**Pfizer Labs** New York, New York
5	**General Medical Kansas** Wichita, Kansas
6	**Retail Credit Company** Kansas City, Missouri
7	**The Upjohn Company** Kalamazoo, Michigan
8	**Creative Systems, Inc.** Shawnee Mission, Kansas
9	**E. R. Squibb & Sons, Inc.** Princeton, New Jersey
10	**Washington National Insurance Company** Evanston, Illinois
11	**G. D. Searle Laboratories** Chicago, Illinois
12	**The Medical Protective Company** Fort Wayne, Indiana
13	**Munns Medical Supply Co., Inc.** Topeka, Kansas
14	**Hoechst-Roussel Pharamaceuticals, Inc.** Somerville, New Jersey
15	**Ayerst Laboratories** New York, New York
16	**Phone-A-Gram System, Inc.** San Francisco, California
17	**Coca-Cola USA** Chicago, Illinois
18	**Rowell Laboratories, Inc.** Baudette, Minnesota
19	**Bristol Laboratories** Syracuse, New York
20	**Blue Shield of Kansas** Topeka, Kansas

The Kansas Medical Society is grateful for the convention program grants received from:

Ciba-Geigy Corporation
Summit, New Jersey

Eli Lilly & Company
Indianapolis, Indiana

A. H. Robins Company
Richmond, Virginia

The Upjohn Company
Kalamazoo, Michigan

A COFFEE LOUNGE WILL BE OPEN IN THE EXHIBIT AREA THROUGHOUT THE CONVENTION—*Compliments of Berlin-Wheeler, Inc., Topeka.*

Councilor Reports

Activities in the Council Districts of Kansas

DISTRICT 1

A meeting of the societies' members, executives, and hospital personnel was held last fall at the Atchison Hospital, for the information presented by Jim Agin, regarding PSRO and the Kansas Foundation for Medical Care, Inc. Better understanding resulted, but there is still considerable concern over the function of the Foundation.

The need for concerted effort in regard to medical-legal problems is keenly felt by several of our members as well as our hospital. Clearly, some new approaches must be found and it is gratifying to have the Kansas Medical Society Committee on Malpractice making progress.

We were quite pleased to have the aviation activities included in the Sports Day activities for the 1974 Annual Meeting. Our thanks to Gary Rexford for his efforts in that regard. It offers an ideal way for the physician-pilot to take his biennial check-up flight.

It continues to be a busy time for our members. Dr. Frank Bosse, of Atchison, has retired from practice because of health problems, but he has very graciously continued to help out on our staff records committee work, which is very much appreciated. We have two board certified surgeons in Atchison now, Drs. Burke and Tayiem. Dr. Burke completed his surgical residency at Kansas City General, with two years of additional training in thoracic surgery at Mt. Vernon; Dr. Tayiem completed his residency at St. Francis Hospital, at Wichita. Both are quite busy.

Some of us are trying to promote an educational program using video cassettes. We would like to hear from anyone who is interested.

We would favor expansion of the staff and field work by the Kansas Medical Society.

WAYNE O. WALLACE, M.D., *Councilor*

DISTRICT 2

A major concern in Wyandotte County has been the potential impact of the new federal law creating health planning agencies. The concern arises from the possibility that for purposes of this bill, Wyandotte County (and perhaps Johnson and Leavenworth as well) might be attached to the counties of western Missouri. While it would make little sense to create a Kansas district that deprived it of its only medical school, the physicians of Wyandotte County have not felt disposed to rely on the common sense of those who make these decisions in Washington. The Board of Directors of Wyandotte County are on record with Governor Bennett urging that the state of Kansas be made a single agency under this bill. Similar support has been received from the Kansas Medical Society through efforts of the Legislative Committee.

There has been a noteworthy resurgence of medical student interest in the county and state societies. These students, authorized by the state society to form a component society of their own, have not elected this route. Instead, they are applying through Wyandotte County for membership in the Kansas Medical Society. The movement parallels a marked interest among medical students in becoming primary care physicians, and the two phenomena may be related.

District 2 is pleased to make its annual report of increased membership. The 325 voting members of December 1973 have been increased to 350 by December of 1974.

ROBERT P. HUDSON, M.D., *Councilor*

DISTRICT 3

The physicians of District 3 (Johnson County Medical Society) engaged themselves in various activities as a society during this past year. Six of the nine monthly meetings which usually are held (we vacation in June, July, and August) were attended by an informed speaker or resource person.

Additionally, a preliminary planning meeting was held in conjunction with some representatives of the Wyandotte County Medical Society and the University of Kansas Medical Center in regard to the Medical Foundation and PSRO. When it becomes necessary, the group will be able to sit together and undertake its responsibilities.

Further, a sports day was held in July, and attended by 30 physicians and wives with an end-of-the-day dinner at Brookridge Country Club.

At the present time, various committees and individuals of the medical society and of the Auxiliary are at work preparing for the privilege of hosting the Kansas Medical Society in Overland Park on May 4-7, 1975.

DONALD J. SMITH, M.D., *Councilor*

DISTRICT 6

The Shawnee County Medical Society has been busy with many programs including activities of the Shawnee County Medical Foundation, operation of the Topeka Blood Bank, studying the feasiblity of a Health Maintenance Plan, assisting with an emergency medical technician course, involvement with TV educational programs, etc., all in addition to the usual county medical society functions.

We have had approximately 25 new practicing physicians join our medical community in the past year. The medical society is continuing its participation in residency programs.

Regular grand rounds seminars and CPCs are being well attended and are increasing in popularity. The medical staffs at both St. Francis Hospital and Stormont-Vail Hospital are also contributing time and expertise to both hospitals' expansion plans. We are very proud of these local efforts for improved medical care in our community.

DONALD R. PIERCE, M.D., *Councilor*

DISTRICT 7

We were pleased that Dr. Ed Campbell was elected Treasurer of the Kansas Medical Society at the 1974 Annual Meeting.

In July, we welcomed Dr. Stephen Knecht, a radiologist, to the group in Emporia.

The President's annual message to our district meeting was given by Dr. Blank at the November meeting.

ROYAL A. BARKER, M.D., *Councilor*

DISTRICT 8

District 8 is now composed of Butler, Cowley, and Greenwood counties. Elk and Chautauqua counties have withdrawn and are now affiliated with the Southeast Kansas Medical Society, which is closer geographically to them.

There have been no specific problems in this district during the past year which required the attention of the Councilor. We have recruited no new medical personnel but, as I understand, there are prospects for a few new faces in the near future.

The Kansas Foundation for Medical Care, Inc., presented a program for District 8, on October 17, 1974, in the Elk's Club at Winfield. Representatives attended from Butler and Cowley counties. The program director was Mr. Jim Agin, of Topeka, and much discussion followed the presentation.

The circuit courses from the University of Kansas Medical Center were held in Winfield this year and as usual were a great success. We had excellent attendance from the surrounding counties and northern Oklahoma.

We are looking forward to the coming year and, as mentioned previously, we are hoping to see some new young faces at our county medical society meetings.

SIGURD S. DAEHNKE, M.D., *Councilor*

DISTRICT 9

District 9 held a meeting on October 22, at which time Dr. Francis T. Collins presented the program on the Kansas Foundation for Medical Care, Inc.

On January 23, at a meeting held in the Hilton Inn, Salina, Dr. John N. Blank, KMS President, was our guest speaker.

Both meetings were fairly well attended.

KERMIT G. WEDEL, M.D., *Councilor*

DISTRICT 11

The Medical Society of Sedgwick County Foundation for Medical Care, Inc., after an unsuccessful attempt to work out an agreement with the Department of Social Welfare for care of Title XIX recipients in Sedgwick County, has met with private industry with the concurrence of the general membership and seems close to having a contract with one of the local aircraft plants to provide care beginning August 1975. Interest in the Foundation type of plan has been evident, and the members of the Foundation feel that this is a good beginning.

The Wichita Branch of the Kansas University Medical Center has had a most rewarding initial year. At the society's December meeting, two of the students reported on their experience at the Branch, and both felt that it had been a most rewarding experience. Contact with the KU Medical Center also indicates that the response from those students who have been to Wichita has been excellent and all are very pleased with the program. The number of students attending Wichita will be gradually increased and the blend of private practitioners and full-time faculty is working harmoniously. Wichita Medical Education Association, with the representation of the local society, is involved with the decisions vital to continue a quality program of this scope and magnitude. Special praise is due Dr. D. Cramer Reed, Dean of the Kansas University Medical Center College of Health Sciences, Wichita Branch, for his efforts at coordination and fine work he has done in establishing this program.

Another activity the medical society has been involved in is the establishment of the emergency medical service for the City of Wichita and Sedgwick County. In ad-

dition to the three physicians who are members of the Board of Health, several physicians and the director of the society are on the advisory board which is studying the implementation of the agreement signed by the city and county governing bodies and which makes recommendations to the Board of Health. Despite some initial controversy, the program is moving forward and we feel that establishment of a quality EMS service for Sedgwick County is certain.

Again, the society has had the influx of a good number of new members both in various specialties and in family practice. It is especially encouraging to see the increase in the number of men applying for membership to the society from the family practice specialty.

The Medical Society of Sedgwick County Legislative Committee continues to meet every Friday noon when the legislature is in session. We have a physician contact for each of the legislators from Sedgwick County, and plan to have a dinner for the legislators and their spouses in the near future. The society feels that this has been a very important facet of our ability to get our views across to the legislators and the legislators themselves seem to look forward to this largely social, very low-key meeting.

The Medical Society is cognizant of the fact that one of its former Auxiliary's presidents now serves the Women's Auxiliary to the Kansas Medical Society as its President, we would like to take this opportunity to congratulate her on the job she has done, and also pass along our congratulations to the Women's Auxiliary as it celebrates its Golden Anniversary. It represents 50 years of faithful service to the doctors of Kansas, and work in their local communities by the wives of physicians to accomplish the objectives of the Medical Society.

WARREN E. MEYER, M.D., *Councilor*

DISTRICT 12

District 12 has the usual problem of a shortage of physicians. We lost three and gained only two during the past year.

Dr. Blank visited the Pratt-Kingman County Medical Society in November, and attended the Tri-County meeting in March.

Our problem with HEW, PSRO, the AMA, malpractice insurance, fees, KaMPAC, postgraduate education, and rules for Physicians Assistants are discussed but never fully resolved.

VERNON W. FILLEY, M.D., *Councilor*

DISTRICT 13

During the current year, the physicians of Central Kansas welcomed several new practitioners to the area, including Dr. Combs practicing in Phillipsburg with Dr. Steinkruger; Dr. Berner practicing with Drs. Hamilton and Clark in Wakeeney; and just to the west of our district, Dr. Carmen practicing with Drs. Gunter and Hiesterman in Quinter. Also locating in Ness County were Drs. David K. Gangadhar and his wife. In Hays, Dr. Tovar entered family practice; Dr. Cecil joined Dr. Wiegman in radiology; Dr. Enberg and Dr. Fent await the arrival of Dr. Cox to join them in the practice of pediatrics; and Dr. Wilcox will join Drs. Mattick and Carlson in the practice of orthopedics, while Dr. Allen will shortly commence the practice of internal medicine. We were fortunate in having no deaths in our region and no current-year retirements. Thus, the total physician population has enjoyed some increase.

Perhaps it is well that there is some increase in physicians, not only to attend to the absolute patient load, but also to cope with the multiplicity of new regulations being forced upon all of us. Physicians in our area share the concern and anxiety that physicians throughout the state and nation now have for the continuing proliferation of regulations and clerical requirements foisted upon us by the review processes encompassed by PSRO and the new 24-hour certification rule. We also have considerable anxiety about the implications of the new health service agency concept presently to be embraced in Public Law 93-641.

Were this evil not sufficient unto the day, there is continuing concern and dread over the implications of the malpractice insurance nonavailability and ever-rising rates. We take some comfort in knowing that Dr. Gregg Snyder is giving very capable leadership in this area, and wish him well in his efforts to convince the legislature of some of the required changes which must be made.

Our physicians hope that the continuing education requirements imposed by the recent Kansas Medical Society amendments may be fulfilled by programs to be offered not only within the confines of the state but also regionally and even locally.

Of some considerable concern to the membership has been the recent entry of a health assessment van operating apparently from outside of the state and to the best of our knowledge based on no special unmet need. This organization has now opened its doors both in Garden City and in Hays. A resolution relating to this operation will be introduced in the House of Delegates meeting this spring.

L. WM. HALLING, M.D., *Councilor*

DISTRICT 17

This will be my last report as Councilor. District 17 still has a critical shortage of doctors. I am afraid that if

some relief is not available soon that we may lose some more doctors. The average age of doctors in Western Kansas is greater than that of doctors in Eastern Kansas.

We are fortunate in having David Pfannenstiel, M.D., at Leoti. Wichita County was without a physician for over a year before he came in October 1974. Garden City has gained some doctors and lost some. The net gain is zero.

I feel that the Kansas Medical Society, with the cooperation of the University of Kansas Medical Center, must come up with more physicians for Kansas, and Western Kansas in particular.

GALEN W. FIELDS, M.D., *Councilor*

DISTRICT 18

The annual meeting of District 18 of the Kansas Medical Society was held at the Eldridge Hotel, Lawrence, on September 17, 1974. It was attended by physicians and administrators representing all of the county societies in the district, and their wives.

Dr. Francis T. Collins, President of the Kansas Foundation for Medical Care, Inc., presented the program on PSRO. This was followed by a lengthy discussion and a question-answer period. The meeting was helpful in informing the membership about PSRO and its implications.

GLENN L. MADSEN, M.D., *Councilor*

NECROLOGY REPORT

Following is a list of the members of the Kansas Medical Society whose deaths have been reported since the last meeting of the House of Delegates.

Name and Address	*Age*	*Date*
Kellogg F. Bascom, *Manhattan*	82	May 3, 1974
Lynn E. Beal, *Fredonia*	68	Apr. 29, 1974
Cyril C. Brown, *Wichita*	76	July 22, 1974
George A. Chickering, *Hutchinson*	88	Nov. 27, 1974
John I. Davies, *Topeka*	56	Jan. 7, 1975
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Nominating Committee

The Nominating Committee of the Kansas Medical Society met on Thursday, January 23, 1975, and submits to the House of Delegates the following list of nominations for the elective offices of the Society. Wherever more than one nomination appear, these are presented in alphabetical order. A very brief biography accompanies each name.

President-Elect

Emerson D. Yoder, M.D., Denton. Born in 1914. Graduated from the University of Kansas School of Medicine in 1949. Has served as Constitutional Secretary.

First Vice-President

John D. Huff, M.D., Kansas City. Born in 1921. Graduated from the University of Kansas School of Medicine in 1952. Is past president of the Kansas Academy of Family Practice. Has served as Councilor.

Second Vice-President

Richard M. Glover, M.D., Newton. Born in 1921. Graduated from the University of Kansas School of Medicine in 1953. Is currently serving as Councilor.

Chester M. Lessenden, M.D., Topeka. Born in 1918. Graduated from the University of Kansas School of Medicine in 1943. Is past chairman of the Kansas Dermatology Society. Has served as Treasurer.

Warren E. Meyer, M.D., Wichita. Born in 1927. Graduated from the Northwestern University School of Medicine in 1951. Is currently serving as Councilor.

Constitutional Secretary

Phillip A. Godwin, M.D., Lawrence. Born in 1928. Graduated from the University of Kansas School of Medicine in 1955. Is currently serving as Constitutional Secretary.

Treasurer

Edward G. Campbell, M.D., Emporia. Born in 1931. Graduated from the University of Kansas School of Medicine in 1961. Is currently serving as Treasurer.

AMA Delegate

Clair C. Conard, M.D., Dodge City. Born in 1927. Graduated from the University of Kansas School of Medicine in 1955. Is currently serving as Speaker of the House of Delegates, and AMA Delegate.

Kenneth L. Graham, M.D., Leavenworth. Born in 1921. Graduated from the Ohio State University School of Medicine in 1945. Has served as President.

AMA Alternate

Lew W. Purinton, M.D., Wichita. Born in 1923. Graduated from the University of Kansas School of Medicine in 1948. Is currently serving as AMA Alternate.

Kermit G. Wedel, M.D., Minneapolis. Born in 1932. Graduated from the University of Kansas School of Medicine in 1960. Is currently serving as Councilor.

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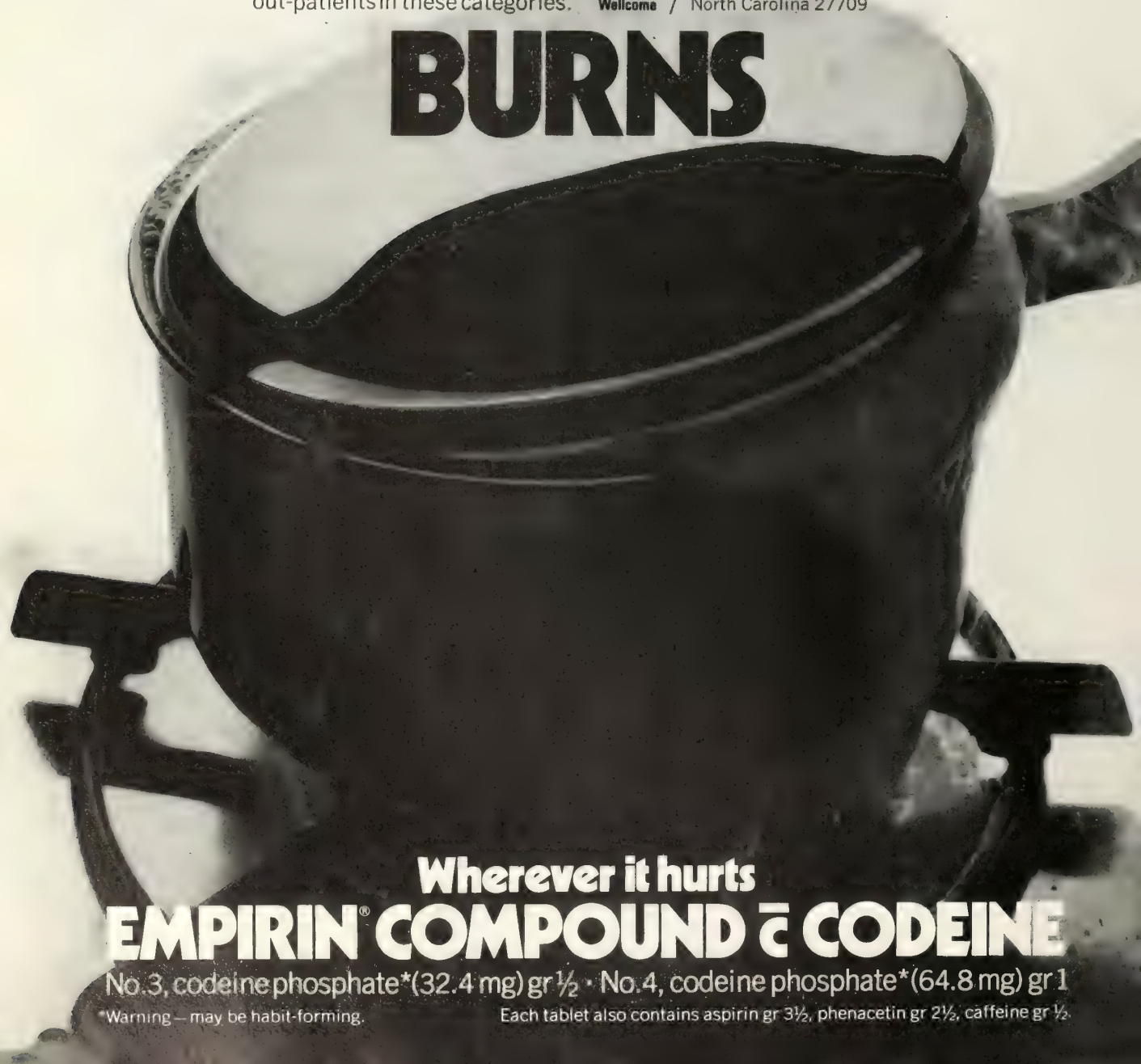
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Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

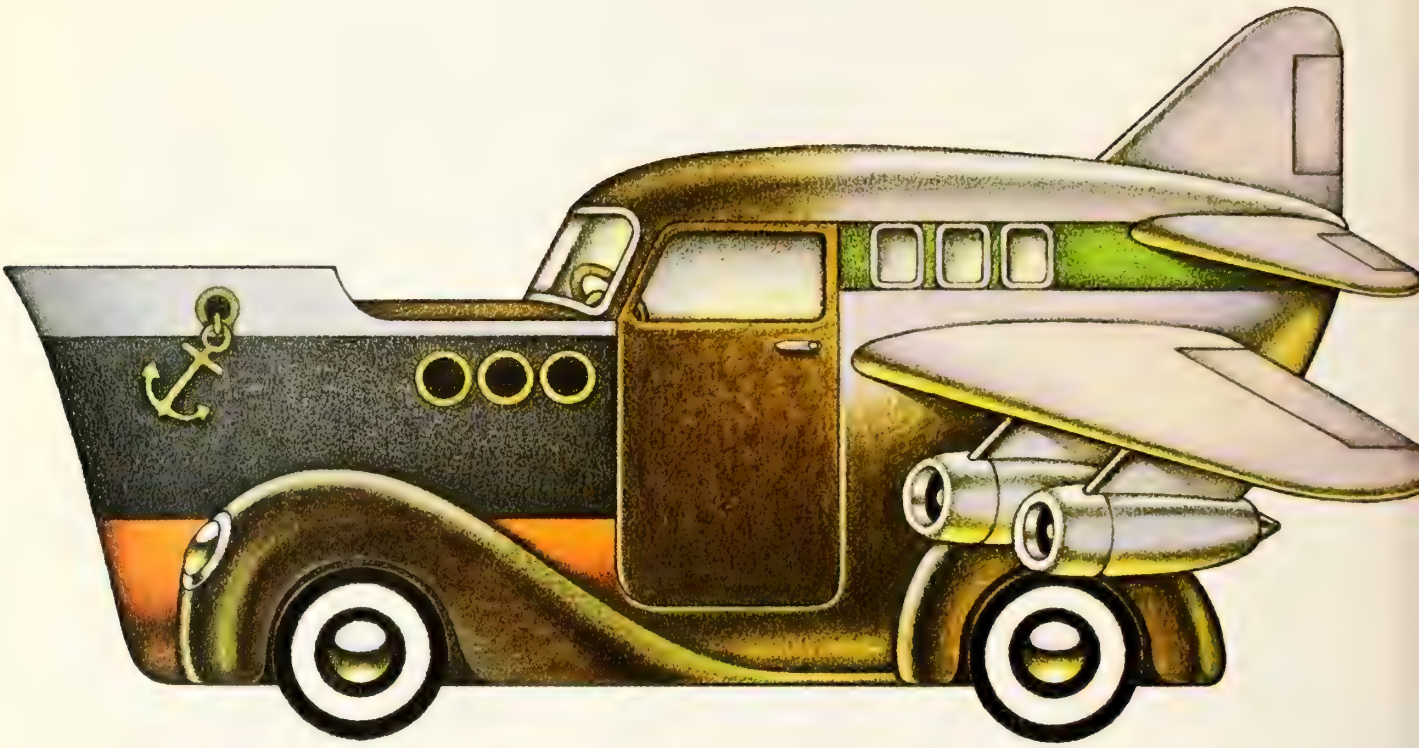
Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

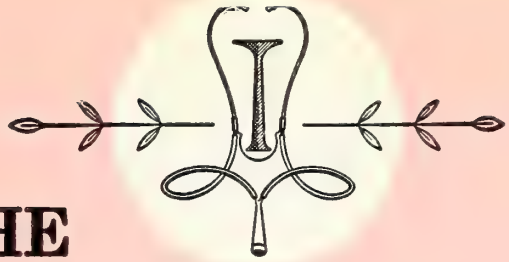
Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

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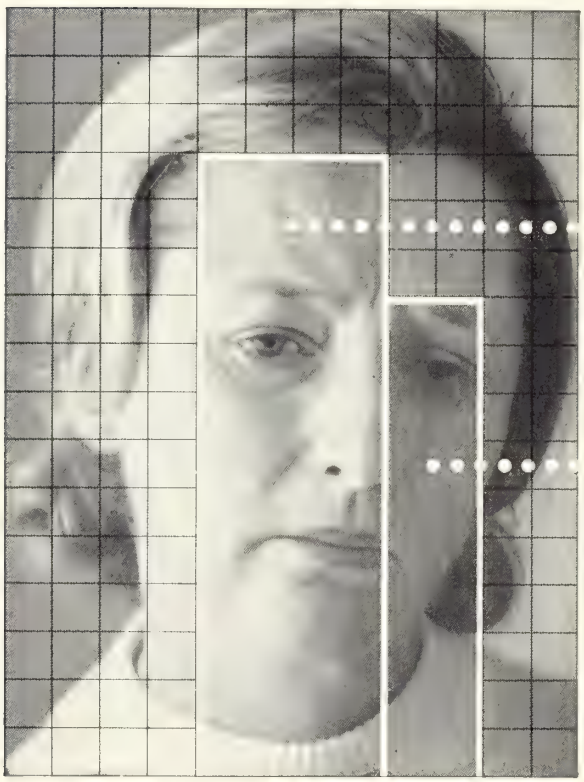
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1975

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequen and/or severity of grand mal seizures m require increased dosage of standard an convulsant medication; abrupt withdraw may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) hav occurred following abrupt discontinuanc (convulsions, tremor, abdominal and mu cle cramps, vomiting and sweating). Kee addiction-prone individuals under careft

respond to one

According to her major
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There are other advan-
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anagement of psychoneu-
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pressive symptoms: the
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alium is pronounced and
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ovement is usually apparent
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



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in psychoneurotic
anxiety states
with associated
depressive symptoms

rveillance because of their predisposi-
n to habituation and dependence. In
egnancy, lactation or women of child-
aring age, weigh potential benefit
ainst possible hazard.

ecautions: If combined with other psy-
otropics or anticonvulsants, consider
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rcotics, barbiturates, MAO inhibitors
d other antidepressants may potentiate
action. Usual precautions indicated in
tients severely depressed, or with latent
pression, or with suicidal tendencies.
Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Volume LXXVI, Number 5—May, 1975

The JOURNAL of the KANSAS MEDICAL SOCIETY

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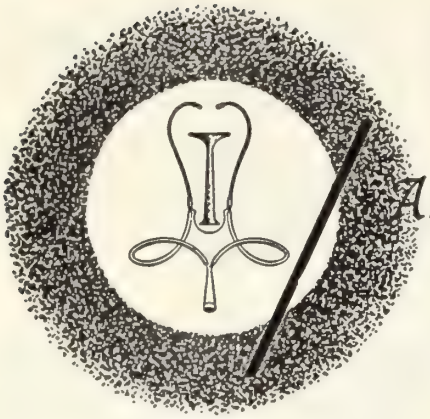
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CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

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Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the **Doctor's Calendar.** ***Notice of the session is posted in advance to allow the physician time to make preparations.***

JUNE

June 1-4 — Seminar: Toward Understanding Human Behavior and Motivation, The Menninger Foundation, Topeka. INFO: Registrar, Box 829, Topeka, Kansas 66601.

June 14-19 — American Medicine Association Annual Meeting, Atlantic City. INFO: 535 N. Dearborn, Chicago 60610.

June 23-26 — American Orthopedic Association, Homestead, Hot Springs, Va. INFO: R. E. King, M.D., Suite 545, 340 Blvd. N.E., Atlanta 30312.

JULY

July 27-Aug. 1 — American Medical Tennis Association, Seattle. INFO: PO Box 183, Alton, IL 62002.

AUGUST

Aug. 11-15 — Aspen Mushroom Conference, Hotel Jerome, Aspen. INFO: 330 S. Wabash Ct., Denver 80231.

SEPTEMBER

Sept. 7-12 — Flying Physicians Association, Lake Geneva, Wisc. INFO: Albert Carriere, 801 Green Bay Rd., Lake Bluff, IL 60044.

Sept. 12-14 — Mid-Continent Psychiatric Association, Alameda, Kansas City, Mo. INFO: J. L. Chapel, U. of Missouri Medical Center, Columbia 65201.

Sept. 18-20 — Colorado Medical Society, Broadmoor, Colorado Springs. INFO: D. G. Perry, 1601 E. 19th, Denver 80218.

Sept. 19-26 — American Society of Clinical Pathologists and College of American Pathologists, Conrad Hilton Hotel, Chicago. INFO: P. E. Raleigh, 2100 W. Harrison, Chicago, Chicago 60612.

Sept. 20-25 — American Association of Ophthalmology, Sheraton-Dallas, Dallas. INFO: L. A. Zupan, 1100 17th St., N.W., Washington 20036.

Sept. 26-28 — Central Association of Obstetricians and Gynecologists, Broadmoor, Colorado Springs. INFO: C. P. Goplerud, M.D., University of Iowa Hospitals, Iowa City 62242.

University of Colorado:

June 30 — *Pathology in Ob-Gyn*

July 6-10 — *Ophthalmology*

July 14-18 — *Internal Medicine*

July 27-30 — *Pediatrics*

July 31 — *Dermatology*

Aug. 4-8 — *Gastroenterology*

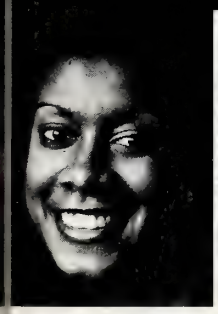
Aug. 13-16 — *Office and Sports Orthopedics*

Aug. 18-21 — *Gynecology*

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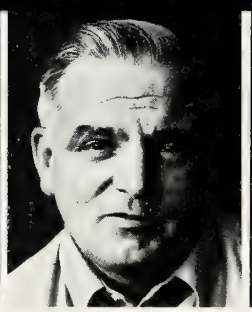
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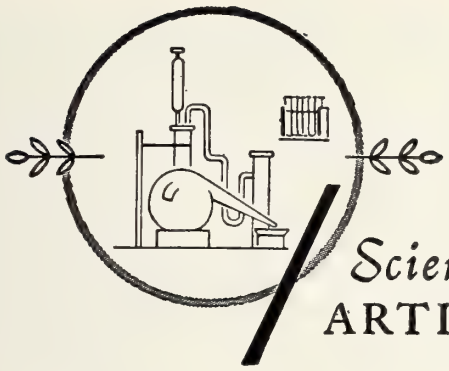
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Diabetes Mellitus

The Child With Diabetes

R. A. GUTHRIE, M.D., D. W. GUTHRIE, R.N., *Wichita, and*

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DIABETES MELLITUS in the child is the purest form of the disease. Blood vessel pathology or other possible, negative aspects of the disease have not yet had time to occur. Diabetes in a child has little comparison with the adult, or maturity-onset type of diabetes. Fundamentally, the child has total, or almost total, pancreatic involvement—whereas the maturity-onset (non-insulin-dependent) diabetic has a more stable diabetes because he retains some insulin-secreting ability in his pancreas. Furthermore, a child is a changing and developing being; therefore, the management of the disease in a child growing into young adulthood is an ever-changing process. Management of diabetes in the child is, therefore, more difficult than in the adult due to growth, erratic exercise patterns, and the child's fluctuating emotional needs. These changes increase the stress and make the process of balancing the regime to the child's life style more difficult. Thus, it is imperative that the child or young adult with this chronic disease be given special consideration.

Incidence and Complications

The incidence of diabetes in children has been variously reported as 1:2,500 in the older literature,[1] and 1:600 in school-age children in a recent study.[2] The true incidence in the total childhood population is probably somewhere between these two figures, or about 1:1,200. Studies are now being undertaken in Michigan and Florida, and soon will be undertaken on a national level, to determine the true incidence of diabetes in children. While diabetes is the most common of the endocrine-metabolic diseases, it is uncommon enough in children so that the average pediatrician or family practitioner will see very few cases in the course of his practice. He would not be expected, therefore, to maintain the high level of expertise in juvenile diabetes that he might maintain in other fields. Likewise, the average pediatrician will see few children over 16-18 years of age; thus, he will not see problems which occur in patients who have had the disease for 10-15 years or longer. Thus, it has been much more difficult to convince the pediatricians than to convince the internists of the relationship between the control of diabetes and the development of vascular disease. All physicians recognize the life-threatening complications of diabetes, and most can handle these complications well, but few realize the dangers of the chronic complications. It is easy to undertake treatment in a way that will prevent the acute complications and satisfy the parents, the child, and the physician. Careful management, however, is needed to conserve the child's ultimate health. There is increasing evidence of the need for a high level of metabolic control and the ability of such control to prevent vascular disease and the chronic complications of diabetes.

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A few of these important studies will be cited here. Siperstein[3] developed a useful tool for studying the vasculature. He measured the thickness of capillary basement membranes (CBM) by electron microscopy in tissue obtained by biopsy of the quadriceps muscle. Siperstein interpreted his data to mean that the CBM thickening (the lesion of diabetic microvascular disease) is genetically determined and is independent of control of the disease. This opinion has been widely adopted in the scientific world. More recent information obtained by Kilo and Williamson[4] and by Guthrie, *et al.*,[5] is establishing a definite relationship between duration, severity, and control of the disease. The data of Guthrie, *et al.* are particularly striking in that a group of very well-controlled diabetics of 15 years' duration had CBMs that were thinner than those of poorly controlled diabetics of 3 years' duration. At 15 years' duration, the poorly controlled patients had CBMs that were over twice as thick as the well-controlled patients of the same duration (1,507 Å vs 750 Å).

Data recently published by Osterby-Hansen[6] have established that the renal lesions of diabetes parallel the muscle findings, and new data[7] by this group are again establishing a relationship between control of the disease and prevention of renal disease in diabetic children.

Data recently published by Bloodworth and Engerman[8] have provided an animal model for diabetic micro-vascular disease. This group has been able to produce retinopathy, nephropathy and CBM thickening in experimentally diabetic dogs, and has been able to prevent vascular disease by careful control of the diabetes, using multiple doses of insulin each day. This group was able to produce diabetic microvascular disease in dogs within five years in animals receiving a single injection of NPH insulin per day. On the other hand, they were able to prevent vasculopathy in litter mates when two or more injections of NPH insulin per day were given.

Studies by Spiro and Spiro[9] are leading to a clearer understanding of the mechanisms for the development of microvascular disease. These authors are studying the biochemical structure of the thickened basement membranes in diabetes. They have concluded that the basic lesion of the CBM is the conjugation of disaccharide units containing glucose onto the CBM, and that this conjugation of sugars can be prevented by meticulous control of insulin therapy which will maintain low levels of the sugar substrates and also prevent the action of the enzymes involved in the conjugation process.

Other workers[10, 11] are elucidating the mechanism of the development of cataracts, neuropathy and, perhaps, disease of the large vessels in diabetics. The polyol pathway of glucose metabolism, through sorbitol, its alcohol form, seems to be the mechanism of these complications of diabetes. The polyol pathway is an alternate pathway of glucose metabolism driven by high substrate (glucose) levels. Careful control of blood glucose levels will prevent shunting of glucose through the polyol pathway and thus, hopefully, prevent the above-mentioned complications.

It is becoming increasingly clear, therefore, that it is possible to increase the life expectancy and to prevent or delay the complications of diabetes with a high level of metabolic control of the disease.

Clinical Diabetes

The early detection of diabetes has definite benefits. The current concepts of the stages of diabetes are illustrated in *Figure 1.* The early stages of diabetes (pre and chemical diabetes) will be further discussed in a future publication.

In the child with overt diabetes, hospitalization is desirable for initial regulation for a number of reasons. One of the basic reasons for hospitalization is to reestablish the nutritional status of the child and to determine the maintenance-insulin requirements. Another important reason is to develop a rapport with the family and the child and, further, to educate both the parents and the child to their disease.

Many children produce an endogenous supply of insulin for several weeks or months after initial regulation of the disease. At that time (the honeymoon phase of diabetes) they will respond to improved diet and almost any insulin management. We now believe that the usual treatment of children at this time, using a single, low dose of insulin per day, constitutes sub-optimal treatment: a single dose of insulin cannot provide 24-hour insulin coverage. Endogenous insulin production will be rapidly lost, and complete or brittle diabetes is the inevitable result.

Several recent studies[12–14] have demonstrated the inadequacy of a single, daily dose of intermediate-acting insulin *(Figure 2).* Since the intermediate-acting insulins do not last 24 hours, a single dose will provide inadequate coverage during the night, and nighttime hyperglycemia and glycosuria are the result. This may, however, be missed if second-voided urines are used for testing for glycosuria. When the morning dose of insulin is increased, the duration of action can be somewhat extended (nighttime hypoglycemia can occasionally be produced with Lente insulin if very high doses are given), but are usually still inadequate to provide the kind of total coverage indicated by Spiro[9] and

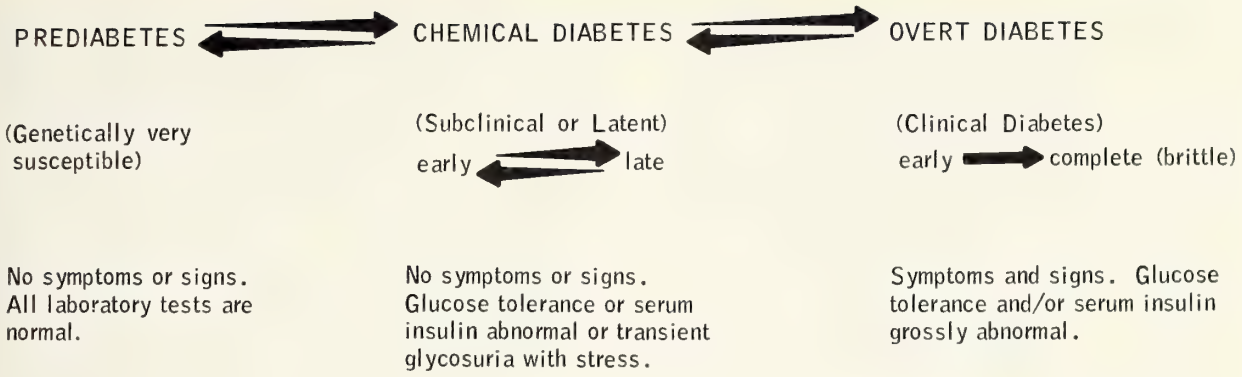


Figure 1

others[8] that may be needed to prevent the development of vascular disease. When a single dose of insulin is given in the morning and the dose is increased to prevent nighttime and early morning glycosuria, there will usually also be an increase in afternoon or evening (sometimes nighttime) hypoglycemia without totally preventing glycosuria and nocturia. The physician, then, wisely chooses glycosuria rather than hypoglycemia.

It is now possible to both prevent hypoglycemia and hyperglycemia with glycosuria by careful attention to insulin administration and meal planning. Recent studies[14] on the absorption and action patterns of NPH and regular insulins alone, as well as in combination mixtures, have established the onset, peak, and duration patterns for these insulins in children *(Figure 2)*. These studies have also given us the needed information to develop a therapeutic regimen that will affect the high degree of metabolic control needed to prevent the chronic complications of diabetes and to do so without undue danger of serious insulin reactions.

Regimen for Control of Juvenile Diabetes

Three meals and three between-meal-snacks provide more physiologic, nutritional balance in children than do the usual three meals. This is true for non-diabetic as well as diabetic children. The adult often follows a three-meal, three-snack eating pattern (mid-morning, mid-afternoon coffee breaks and a bit to eat before going to bed really constitute snacks). Children, how-

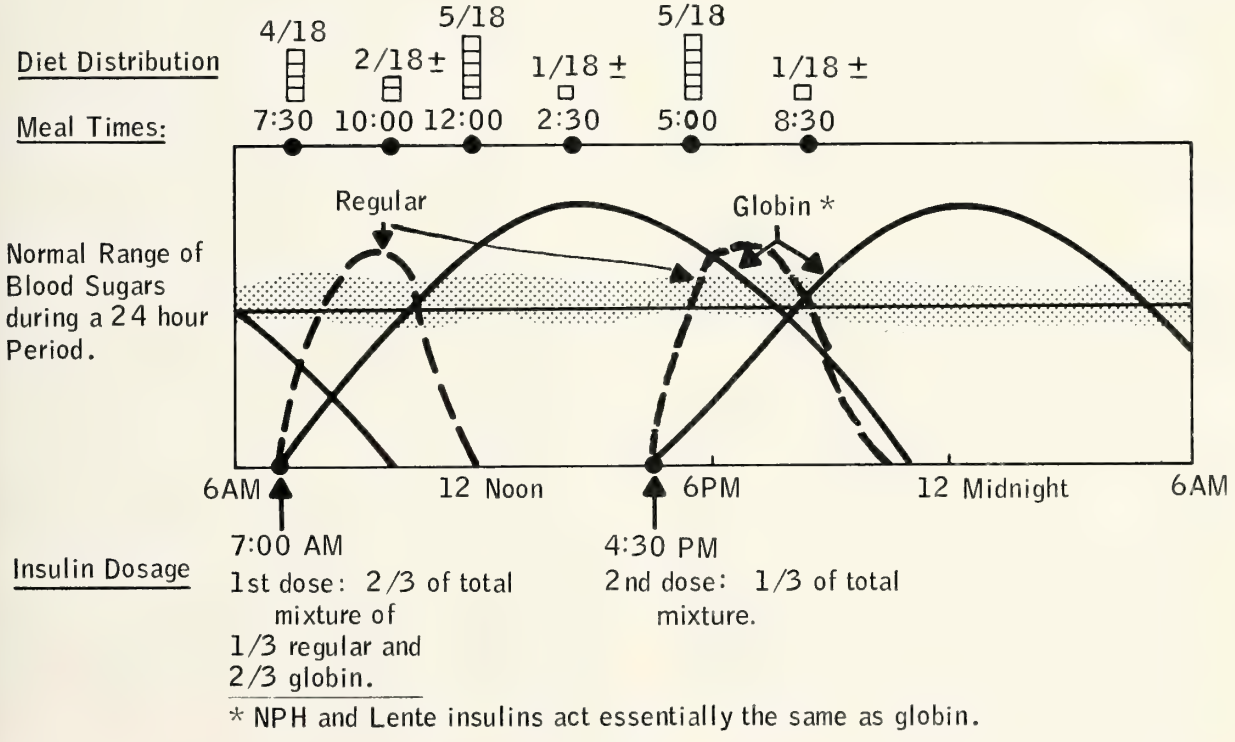


Figure 2

ever, though they require a much higher relative or even absolute calorie intake (with smaller stomachs to contain it), are usually deprived of snacks because of social stigma that has become attached to them. The basic three-meal, three-snack eating pattern around which our insulin regime has been built, was developed by observing the eating habits of farm and urban children from Iowa, Missouri, and Kansas. Diurnal blood sugars were obtained in these normal, non-diabetic children. Diabetics were then fed according to the same meal plan, and diurnal blood sugars were obtained. The insulin dosage was determined by a trial and error method in relationship to the needs of exercise and meal patterns of individual children. Further studies have recently been completed and have determined that for the most optimal treatment a mixture of NPH and regular insulin given one-half hour before breakfast and one-half hour before supper is needed.

Initial Regulation

Regular insulin is used in a dose of about one unit per pound of body weight for initial control in the acute stage of diabetes following ketoacidosis. Four doses of regular insulin per day are needed. The dosage will rapidly be decreased as the needs of the child are met and as endogenous insulin secretion returns. As the dose stabilizes, the child is changed to two injections per day, utilizing the intermediate-acting and regular insulin mixtures. An attempt is made to keep the diurnal (fasting and postprandial) blood and urine sugars as near normal as possible and to prevent hypoglycemia. During this period of regulation, the child is hospitalized and remains so until complete control is affected and patient education is completed. A few extra days of hospitalization at this point may mean the difference between a well-adjusted, well-regulated outpatient and a frequent hospital patient who is readmitted for acute complications. Because of the length of his regulation period, the child should have his school books and should be sent to physical therapy to attempt to duplicate his home and school regime. Control is estimated from the collection of fractional urines. The sliding scale is not used and is not rational therapy,[15] since one is usually six hours or more behind the patient's actual needs. The fractional urine[16] (where all the urine is collected and pooled at approximately 6 hours' intervals, and the volume and glucose content measured by the two-drop-Clinitest® method) represents a form of a 24-hour-sliding scale. The following day, the spill pattern of the previous day is noted and the insulin for the entire day is ordered in split doses. If sugar has been spilled, the total daily dose of insulin is increased. If the urine is negative for sugar, the next day's dose of insulin is decreased. If these urines are collected, measured and interpreted properly, they accurately reflect the diurnal blood sugar pattern, and regulation of the diabetes can be affected without the trauma of repeated blood sugar determinations.

Continuing Care

Once the child is stabilized and the insulin is decreased to the maintenance dose (0.1-0.2 units/pound/day in the early or honeymooning diabetic), the child can be discharged from the hospital and followed on an ambulatory basis. Careful followup is needed to reinforce education, sustain a positive self-image, and adjust insulin and diet to the changing needs of growth and exercise.

Caloric intake is frequently adjusted to meet each individual child's needs and is given on a three-meal, three-snack regime as follows:

4/18 of the total daily calories are given for breakfast,
2/18 as a mid-morning snack,
5/18 for lunch,
1/18 less as a mid-afternoon snack,
5/18 for supper,
1/18 as a bedtime snack.

These proportions can be rearranged to meet individual patterns and can be varied from day to day as exercise varies. The diet is usually composed of 15 to 20 per cent of the calories from protein, 35 to 40 per cent of the calories from fat, and the remaining 40 to 50 per cent from carbohydrate. The basic difference between the diet of the diabetic child and that of the non-diabetic child is that the diet of the diabetic is planned to try to predict the caloric intake in relationship to the amount of insulin and exercise. The only restriction in the diabetic's diet is in the use of concentrated sweets, which are used only in times of an emergency, such as hypoglycemia. It has been found that the absorption rate of concentrated sweets is very rapid, and cannot be handled since sufficient insulin is not available fast enough to handle such a large intake of sugar.

For optimal treatment, insulin should be given in a split dosage twice daily. Two thirds of the total daily insulin should be given before breakfast and one third before supper. Both injections consist of an insulin mixture that is two-thirds intermediate-acting insulin (NPH, globin or Lente) and one-third regular insulin. The dosage (usually 0.3 to 0.4 units/pound body weight) is determined by trial and error, primarily

from the home record sheets of urine testing. The insulin dosage is adjusted, as often as necessary, to maintain as high a level of metabolic control as is possible without serious insulin reactions. During a febrile illness, the insulin requirements usually increase; and at this time supplemental insulin may be given at lunch and at midnight, at the same time raising the basic amount. Other kinds of stress in children, such as prolonged emotional stress, surgery or the changes related to rapid growth, will increase insulin requirements. In the child, the insulin requirement gradually increases with body size but remains relatively constant in a ratio of 0.3 to 0.4 units/pound/day. During the preadolescent growth spurt, insulin requirements rapidly increase to 0.5 and 0.8 units/pound/day. Also at this time, control is usually more difficult to maintain; however, after puberty has been established, the insulin requirement is somewhat decreased and remains relatively stable during adulthood. If a decrease in insulin is not effected, after pubescence has been established there is a greater possibility of obesity since insulin is a potent appetite stimulant.

No restriction on physical activity is needed. In fact, the more active the child is, the easier the disease is to control. We include physical activity in the child's program in the hospital once he is physically able to tolerate it so that the changes between the hospital and the home will not be too acute. We feel that once the child has returned home, it is wise to keep the dosage of insulin as constant as possible and to make any changes needed with an increase and decrease in food intake in relation to the changes in the exercise pattern. The changes in food intake needed for a particular child at a particular time are learned by the process of trial and error.

The child usually goes home from the hospital with slightly more calories than he had in the hospital, since increased physical activity is expected in the out-of-hospital situation. At each outpatient clinic or office visit, the insulin management is discussed again, and the pattern of food and insulin is gradually evolved to fit into the individual life style and exercise pattern of each child.

We have found that the emotional pattern of diabetic children is usually stable if the support is available from the parents. This support can be maintained through good education and communication, as well as basic management of the disease. If an unwholesome relationship exists between the child and his parents, this can become exaggerated by the diabetes; consequently, the control of the disease is less possible. On the other hand, if loving discipline can be applied during the lifetime of the child, he will become a self-disciplined adolescent and adult who is capable of carrying on his control throughout the rest of his life. The teenage years are naturally the most difficult, and being a diabetic makes them more so. The feelings of rebellion against any type of authority which is often seen in adolescents is magnified by the diabetic against his disease. If these problems are anticipated as the child grows and develops, many problems associated with diabetic adolescents could be prevented.

If the child learns to develop adequately spiritually and physically, he may become a better person because of his experience in dealing with a chronic disease. To be able to do this, the parent should have as much information as possible, not only about the medical and physical aspects of the management of the disease but also about the facilities available in the community to help become better adjusted. As the child becomes older, he should be similarly trained.

At each office visit, diabetic education should be reinforced. Proper procedures for injections and testing the urine are the easiest part of parent and patient education. The parents need to recognize the emotional and spiritual needs of their child as well as the times during the child's growth and development that there will be increased needs for food and insulin to meet the changing needs of growth. Diabetes requires a maximum of self-care. The ability for self-care relates to the parents' understanding of the disease: the more they understand, the better they will be able to follow through in this part of the regulation of the regime.

Conclusion

Until more knowledge is gained about the pathophysiology of diabetes, a high level of metabolic control offers the best means of delaying or preventing degenerative changes. Anything less than trying to maintain the patient's physical responses as nearly normal as possible will have some adverse effect on the changes in the nervous and circulatory systems. If the physician maintains an optimistic outlook in caring for the child with diabetes, this will influence the family to follow the management procedures which would be best for their child, rather than what would be most convenient for the family.

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(Continued on page 107)

Aortic Stenosis

Gastrointestinal Bleeding

MICHAEL W. TREWEEKE, M.D.* ***and***
ALBERT P. MICHELBACH, M.D.,** ***Wichita***

In 1958, two independent observers reported that an association may exist between calcific aortic stenosis (CAS) and unexplained gastrointestinal (GI) bleeding.[1,2] Later that year, Dr. Goldman[3] statistically analyzed over 37,000 consecutive admissions to the Oakland V.A. Hospital and confirmed a positive correlation. In 1961, in a retrospective study, Williams[4] showed that an association existed. However, no causal element could be elucidated. More recent articles in the surgical literature indicate that patients with aortic valvular disease of all types and etiologies have a higher likelihood of GI hemorrhage in the perioperative period, than those patients with mitral valvular disease.[5,6] Later articles have suggested the bleeding point was due to an obscure vascular lesion in the right colon.[7]

A case of associated CAS and unexplained GI bleeding, with the apparent lesion stemming from the right colon, is reported, with a review of literature.

Case Report

A 71-year-old white male was first admitted to St. Francis Hospital in August 1969, for painless melanotic bleeding. Abdominal and rectal examinations were normal. An aortic systolic ejection murmur (SEM) was heard, which was known to have been present for at least ten years prior to admission. Laboratory studies disclosed the following values: hemoglobin, 7.6 gm/100 ml; hematocrit reading, 24%; upper gastrointestinal x-ray (UGI) and barium enema (BE) with air contrast failed to demonstrate any abnormality; sigmoidoscopy was normal to 25 cm. The patient was treated with antacids, anticholinergics, and bland diet for presumed acid peptic disease. He was dismissed within three days of admission, when it appeared his hemorrhaging had subsided.

Two weeks after dismissal, the patient was readmitted with rectal bleeding and, again, his UGI, BE, and sigmoidoscopy were normal. He was dismissed after 19 days on the same regimen. During the fall of 1969 and all of 1970, the patient had two further episodes of hemorrhaging, for which he was not hospitalized. In December 1970, however, he was admitted after rather acute and profound bleeding. Again, the physical examination produced normal results, except for the heart murmur and blood in stool. GI x-rays were normal. Fiberoptic esophagogastroscopy, with the Olympus gastroscope GTF-A and Olympus esophagoscope EF-II, failed to reveal any abnormalities of the esophagus, stomach, and the first part of the duodenum. Five months later, the patient was again hospitalized with similar symptoms. Repeat esophagogastroscopy was negative. The platelets, protime, partial thromboplastin time, and Ivy bleeding time were all normal.

In late January 1974, the patient was hospitalized with rectal bleeding of five days' duration, and hemoglobin of 10.0 gm/100 ml. His stools were dark-red, and averaged three to four per day. Recently, he had noticed dyspnea, exertional chest pain and pedal edema, but denied orthopnea, paroxysmal nocturnal dyspnea, palpitations, dizziness, and syncope. Medications on admission included digoxin 0.25 mg daily; isosorbide dinitrate, 5 mg sublingually, four times a day; and nitroglycerine, 0.3 mg as required, for congestive heart failure and angina pectoris. Blood pressure on admission was 100/50, and pulse 76. Mild fundal, atherosclerotic changes were noted. The neck was supple without venous distension. There was a cardiac murmur transmitted into the carotid arteries bilaterally. The pulse rose slowly with a sustained peak. The chest was clear to auscultation and percussion except for a few basilar rales. The point of maximal impulse was in the fifth intercostal space in the anterior axillary line, with a left ventricular heave and a palpable S_4. A thrill was detected in the suprasternal notch. A soft S_2 with decreased splitting and an audible S_4 were heard on auscultation. In addition, a harsh SEM grade III/VI was heard loudest at the second left interspace and base, and to a lesser extent at the apex. No clicks were de-

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tected. The abdomen was soft, without organomegally or tenderness. No bruits were heard or masses palpated. Good pulse was present and no edema was demonstrated. A moderate amount of melanotic stool was found on rectal examination.

Emergency esophagogastroduodenoscopy was performed in order to try to identify a bleeding point. A thorough examination using the fiberoptic Olympus panendoscope GIF-D produced normal results. Proctoscopy to 25 cm was also normal. The patient stopped bleeding within 48 hours of admission, but not before his hemoglobin had dropped to 9.5 gm/100 ml. Additional blood studies revealed normal coagulation. After several days of stabilization, the patient was administered a barium enema, which was entirely normal with the exception of a very redundant sigmoid flexure. The patient did bleed slightly with the preparation for the examination, i.e., bright-red blood with clots on return of the enemas. Seven days after admission, colonoscopy was performed with the fiberoptic Olympus colonoscope CF-LB to the full length of 185 cm, reaching the hepatic flexure without any demonstrable bleeding point identified.

Cardiac consultation was obtained to evaluate the heart murmur and cardiac status. Electrocardiogram revealed right bundle branch block and evidence of an inferior scar. Cardiomegaly with left ventricular preponderance was present on chest x-ray. The carotid pulse tracing was prolonged with a corrected total ejection time of 0.36 second (normal <0.32 sec.). The one-half ejection time was 0.06 second (normal <0.04 sec.)—also prolonged. An echocardiogram was obtained of the mitral valve because of some question in the auscultatory findings. It demonstrated a normal pattern. The conclusion was: aortic stenosis, moderately severe, with arteriosclerotic cardiovascular disease and congestive heart failure. Because the bleeding had stopped, the patient opted for dismissal rather than further cardiac or GI workup.

Only three days later, he was readmitted with rectal hemorrhage. Selective celiac and mesenteric arteriograms were done immediately. No extravasation or bleeding points could be seen. The only lesion was a marked stenotic change involving the ileocolic branch of the superior mesenteric artery. GI x-rays were again normal and no abnormalities were found on coagulation studies. Because of continued uncontrollable hemorrhage, a laparotomy was performed. No lesions were identified in the colon, although a large amount of blood was present. Total colectomy with primary ileoproctostomy was accomplished. Pathologic examination showed several small dark-brown, dome-shaped areas in the ascending colon, the largest of which measured 0.4 cm in diameter, which on resection were shown to be small hematomas. The mucosa was infiltrated with leukocytes, and lymphoid follicles were present. No hemangiomas, vasculitis, or other lesions were identified which could account for the massive bleeding.

During the same hospitalization, cardiac catheterization and coronary arteriography revealed a dominant right system, but no identifiable lesion of either could be found. An elevated left ventricular end diastolic pressure of 12 mmHg, and a slightly elevated mean left atrial pressure of 14 mmHg was found. There was a peak gradient across the aortic valve of 140 mmHg, with a mean gradient of 80 mmHg by planemetry. The calculated valve orifice was 0.4 sq cm, and the cardiac index was 2.5 L/min/m^2. In addition, the valve was quite calcified and moved poorly. The left ventricular wall was markedly hypertrophied, with deformity of the left ventricular cavity. The conclusion was: moderately severe aortic stenosis, left ventricular hypertrophy, and normal coronaries. The patient is currently considering the recommended valve replacement.

Discussion

Ten patients with CAS associated with GI hemorrhage of undetermined etiology had been reported.[1] It was noted that all of these patients were elderly, 60 to 80 years of age. Shortly thereafter, Schwartz[2] reported his experience of one to two cases per year since 1942. He noted that they were mostly elderly women, over 70 years of age, many of whom experienced recurrent bleeding. Apparently, his colleagues had had similar experiences and had noted the association also. Prompted by Heyde and Schwartz, Goldman[3] reported in the same year having analyzed in excess of 37,000 consecutive admissions to the Oakland V.A. Hospital, that there was a threefold increase in the expected incidence of aortic stenosis (AS) among the GI bleeders as compared to the rest of the patients. One obvious fallacy in this study was the fact that his controls were not matched for age and sex. He did not take into account the cause of AS, nor did he identify the incidence of unexplained GI bleeding in the group of patients with isolated aortic stenosis. It also had the disadvantage of being a retrospective study; nevertheless, it seemed to support the possibility that an association existed.

Williams,[4] in 1961, reviewed the records of 1,443 consecutive GI bleeders, for which he was able to identify a source in 93.5 per cent. Of the 6.5 per cent for which he could not find a reason for the bleeding, he found an incidence of associated AS of 25.5 per cent. The control group, matched in age and sex, and admitted during the same period, had an incidence of

5.2 per cent ($p < 0.01$). Of the 93.5 per cent with an identifiable lesion in the GI tract, the incidence of AS was only 4.4 per cent, which was not statistically different. His patients with AS and unexplained GI bleeding were all elderly, over 60 years of age. There was no appreciable sex differential. Williams offered as explanation for the apparent correlation the possibility of associated visceral atherosclerosis, predisposing the intestine to bleed after minimal physiologic trauma. This comment was particularly interesting in view of our patient having an identifiable stenotic narrowing of the ileocolic artery, which supplied the area of colon from which the bleeding apparently originated. This hypothesis, however, is completely unproven.

McNamara *et al.*,[5] analyzed a group of 211 patients undergoing aortic valve replacement and compared them to a group of 110 patients receiving a mitral valve prosthesis. Twelve per cent of the patients with aortic valve disease had GI bleeding either before or shortly after surgery as compared with only 4 per cent of the patients in the mitral group ($p < 0.05$). Of those in the aortic group who bled, the site was not identified in 19 per cent of the patients. Their data indicated that the higher incidence of GI bleeding in patients with aortic stenosis appeared to be partly explained by the "preponderance of both these conditions in males." Furthermore, they did not feel that the 19 per cent with unexplained GI bleeding represented an unusually high figure when compared with published series ranging up to 26 per cent of all patients with GI bleeding.[8] It was also found that in following the patients after the perioperative period, only one episode of hemorrhage occurred, indicating that repair of the valve protected against further bleeding.[5] A similar article by Katz *et al.*,[6] assessed two groups of patients undergoing open heart surgery with respect to GI bleeding. He also studied 100 consecutive patients with AS who did not receive surgery. Their data indicated that there was a higher incidence of GI hemorrhage among the group of patients with aortic valvular disease whether they were operated or not. However, they explained the association in men on the basis of previous history of ulcer diathesis.

A case report and literature review by Boss and Rosenbaum[7] was of particular interest because their patient bled from the right colon, as did our patient. After numerous episodes of bleeding, transfusions and exploratory surgical procedures, the patient was found at autopsy to have hemorrhaged from the ascending colon. The colonic mucosa showed "moderately severe congestion and ecchymoses in the ascending colon." Multiple sections of the colon revealed "distension of mucosal and submucosal veins and focal perivascular extravasations of blood." We found the same histology in our patient.

The first mention of the ascending colon being the possible source of the GI bleeding occurred during discussion of a case at the Massachusetts General Hospital. The discussant, Dr. Bernard Jacobson, reported his experience of a case of AS, and unexplained GI bleeding in a 70-year-old woman. After two laparotomies and multiple GI x-rays, he consulted Dr. Cattell, of the Lahey Clinic, who had noted several cases which responded to blind right colectomy. In his experience, all of the cases were due to an unexplained "vascular lesion" in the ascending colon which the pathologists were unable to demonstrate. The patient was cured. Three years later, an identical problem in another elderly female was encountered. After several sets of negative GI x-rays, a right colectomy was performed. No lesion was found, but the woman experienced no further hemorrhaging.

Summary

This case report is presented as an example of CAS with associated unexplained GI bleeding. The findings in our patient, like those of others, support the hypothesis that some obscure vascular lesion in the ascending colon is responsible for the bleeding, although the causal relationship remains unknown. Furthermore, right colectomy may be curative if replacement of the aortic valve cannot be undertaken.

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Therapeutic Usefulness

5-Fluorocytosine—A New Anti-Fungal Agent

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AMPHOTERICIN B has been the drug of choice for more than 15 years and was the only significant drug available for therapy of the deep mycotic infections. Although its effectiveness is well proven, serious side effects and difficulty of administration have detracted from its being considered the ideal drug for the deep mycoses. Recently, 5-fluorocytosine became an alternative therapy to amphotericin B in some of the mycotic infections. While its effectiveness is not well proven, there are several advantages to be considered in certain of these infections. This new drug has been useful primarily in fungal organisms in the sub-family Cryptococcideae, which include the genera of Candida, Cryptococcus, Torulopsis, and chromomycoses. The purpose of this paper is to report our experiences using 5-fluorocytosine in five patients. Three patients were infected by Cryptococcus neoformans, and two by Torulopsis glabrata.

Case One

A 74-year-old farmer noted the onset of a cough, yellow sputum, and painful swelling of his wrist in November 1972. At hospitalization in mid-December 1972, he had a lytic lesion in the distal radius, but a negative chest x-ray *(Figure 1)*. Cultures from the lytic lesion grew Cryptococcus neoformans. He was given 5-fluorocytosine in doses of 150 mg/kg/day for three weeks, and then 100 mg/kg/day with clinical improvement. In early April 1973, while still on 5-fluorocytosine, the wrist became worse and aspirate grew C. neoformans. Over the next two months, the patient was given 1,745 mg of amphotericin B, with progressive healing. Recent x-rays showed reossification and calcification of the lesion *(Figure 2)*.

Case Two

A 38-year-old homemaker complained of low back pain. Studies in late December 1972, and at hospitalization in January 1973, showed a 2-cm noncalcified nodule in the left chest. She had mild hypertension and was found to have hyperadrenal corticism. Biopsy of the nodule showed a granuloma, and cultures grew C. neoformans. Postoperatively, a pneumonitis developed and her sputum grew C. neoformans *(Figure 3)*. Bone marrow and cerebrospinal fluid studies were normal. She was given 5-fluorocytosine 100 mg/kg/day for 60 days, with complete recovery *(Figure 4)*. She subsequently underwent bilateral adrenalectomy but there has been no recurrence of fungal disease.

Case Three

A 66-year-old farmer was initially seen with cough and dyspnea of five years duration in June 1972. The chest x-ray showed diffuse pulmonary infiltration. Numerous studies initially and several subsequent evaluations failed to elicit a diagnosis. In September 1973 *(Figure 5)* he was hospitalized for acute urinary retention found to be due to prostatitis. Cultures of

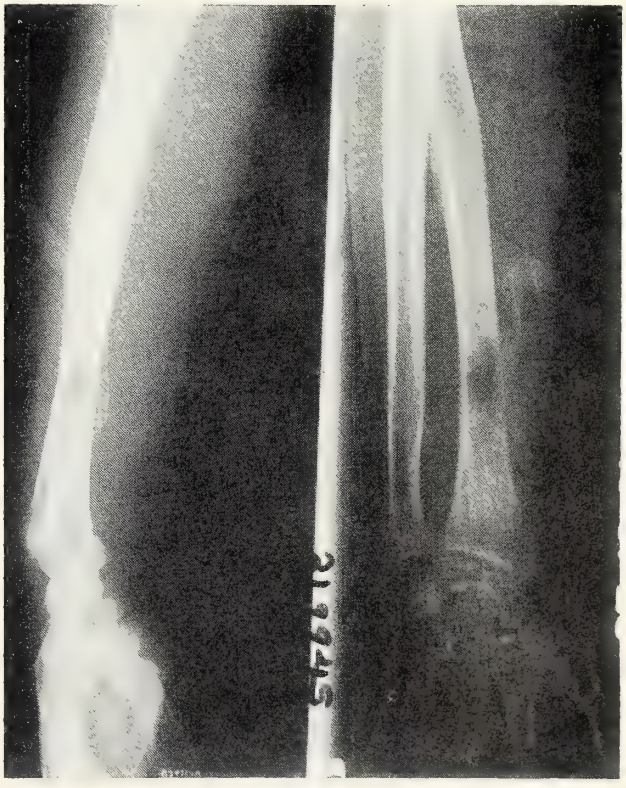


Figure 1

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Figure 2

sputum, urine and, later, resected prostate grew C. neoformans. The bone marrow showed granulomata with negative cultures. Cerebrospinal fluid protein was slightly elevated (78 mg/100 ml), but culture was

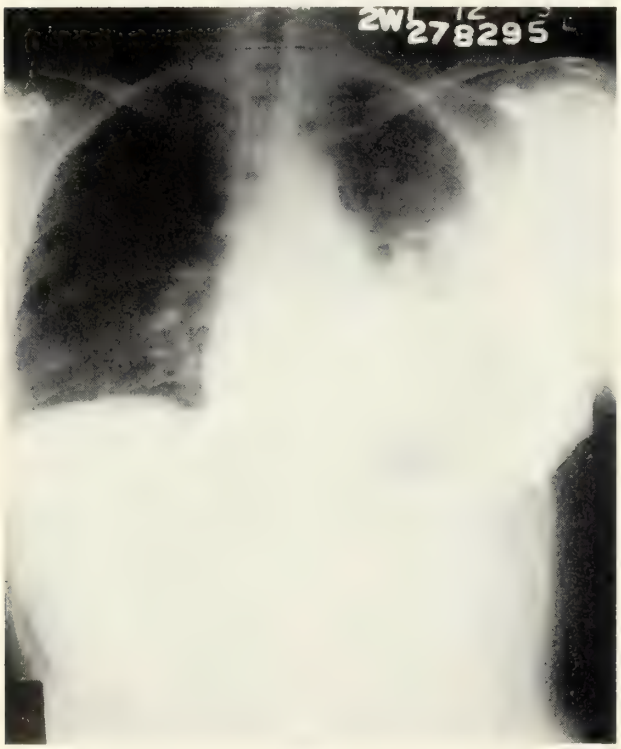


Figure 3

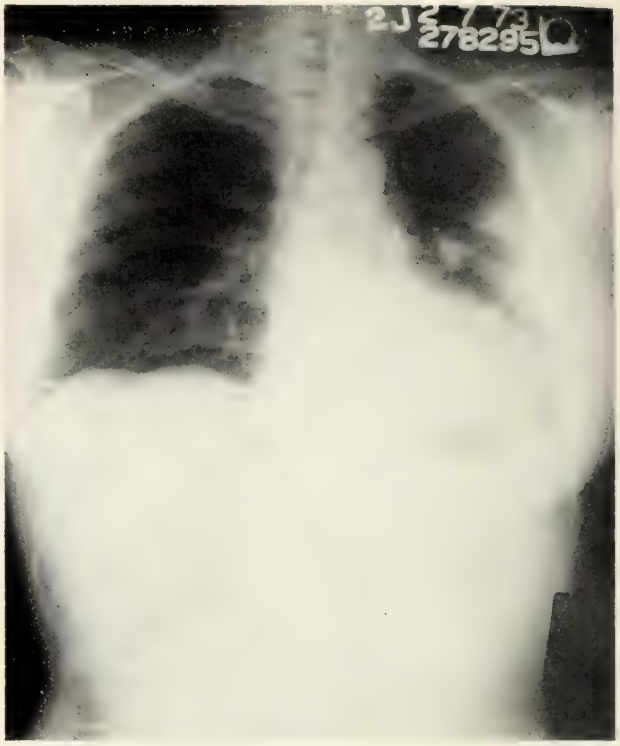


Figure 4

negative. The patient was given 5-fluorocytosine 150 mg/kg/day for 60 days, with improvement in the chest x-ray and reversal to negative cultures of sputum and urine *(Figure 6)*.

Case Four

A 70-year-old farmer had severe intrinsic bronchial asthma. He was hospitalized in late May 1973, for a trial of azothroprine because of steroid side effects. He failed to improve after ten days of therapy, and developed fever and huge, green sputum plugs. Coughed up plugs, as well as bronchoscopically obtained sputum,



Figure 5



Figure 6

grew Torulopsis glabrata. Amphotericin B aerosol therapy for three weeks failed to improve symptoms or to change the fungal growth. In mid-July, 5-fluorocytosine (100 mg/kg/day) and 6-mercaptopurine were begun with significant improvement, so that he was dismissed July 31 on decreased steroids. 5-Fluorocytosine therapy was continued for 60 days eradicating the sputum of Torulopsis glabrata.

Case Five

A 72-year-old woman, with known chronic obstructive lung disease and debilitation from alcoholism, developed a respiratory infection in mid-October 1973. She did not improve on tetracycline and was hospitalized in early November *(Figure 7)*. The chest x-ray showed a bilateral interstitial pneumonitis. There was marked hypoxemia (pO_2-45 mm). Sputum culture grew a large amount of Torulopsis glabrata with no normal flora or other bacteria. Clinically, she was thought to have viral pneumonia with a large bronchial overgrowth of Torulopsis. She was given 5-fluorocytosine 125 mg/kg/day for 32 days, along with supportive therapy. The chest x-ray slowly improved and the sputum grew no fungi at two weeks. Arterial gases improved with her clinical status and she has remained well *(Figure 8)*.



Figure 7

Comment

We realize there are differences of opinion as to whether pulmonary infections due to Cryptococcus neoformans and Torulopsis glabrata should be treated. We felt, however, that after evaluating the total situation in each patient, chemotherapy was highly desirable especially if a relatively non-toxic medication could be used. Because the purpose of this paper is to discuss 5-fluorocytosine we will not further consider these fungal diseases as such.

Discussion

Amphotericin B is a polyene antibiotic derived from

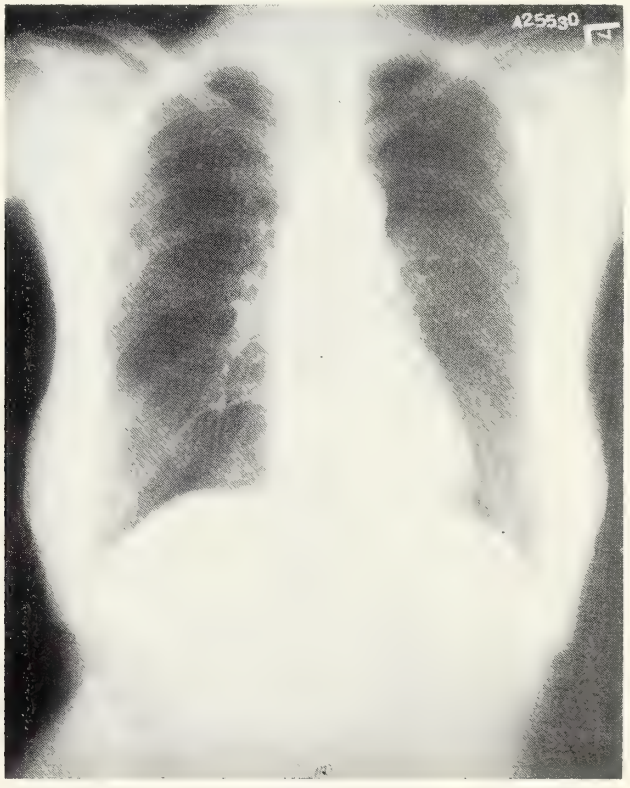


Figure 8

Actinomyces. 5-Fluorocytosine,[1] a chemical agent, is a fluorinated pyrimidine, but unlike 5-fluorouracil it is probably not metabolized by mammalian cells and does not have cancerostatic activity. 5-Fluorocytosine is presumably effective as an antimetabolite because it selectively interferes with metabolic pathways in certain microorganisms while remaining relatively unaffected by mammalian metabolism.

Through studies on the mode of action against Saccharomyces cerevisiae, it has been shown that cytosine, once transported inside the cell by specific permeases, is deaminated to uracil before interfering with nucleic acid synthesis. There may be *de novo* pathways developed around the block which fact, therefore, leads to resistance to the drug. Intermediary pathways of metabolism in other fungi have not been delineated as well. Resistance could be postulated also to develop in the specific absence of 5-fluorouracil permease or of uracil-binding sites.

Administration of a 2-gram dose of 5-fluorocytosine yielded blood concentrations of 10 to 40 μg/ml, which persisted for six to eight hours. Excellent tissue concentrations were found in several organs studied. Shadomy[2] found 64 to 88 per cent of the serum levels in cerebrospinal fluid. Block[3] found similar results. This is in sharp contrast to amphotericin B, for which the cerebrospinal fluid levels are much less than those attained in the plasma. Ninety per cent of an administered dose is recovered unchanged in the urine and 10 per cent in the feces. Block found elevated serum 5-fluorocytosine levels in renal insufficiency, but hepatic insufficiency failed to influence the serum concentration.

Blood concentrations and sensitivity studies are performed using the yeast Sacchromyces cerevisiae on special media. We were unable to obtain such studies due to our laboratory's inability to obtain this special media. Serum levels after 100 mg/kg were 16.78 ± 7.8 μg/ml, and after 150 mg/kg were 43.89 ± 18.9 μg/ml.[4] Utz[5] and Bennett[6] currently recommend that all patients be maintained on 150 mg/kg daily. Resistance, which has been one of the problems with 5-fluorocytosine therapy, has developed more frequently in patients given 100 mg/kg or less daily, especially in patients with cryptococcosis.[1]

The drug is given orally and is well tolerated even in large doses. Side effects have been uncommon. These include nausea, diarrhea, hepatic dysfunction, leukopenia, thrombocytopenia, decrease in hemoglobin, eosinophilia, and skin eruptions. All are reversible when the drug is stopped. Because 5-fluorocytosine has been found to be teratogenic in animals, caution is advised in administering the drug in women of the childbearing age.[6] In comparison with the side effects of amphotericin B therapy, those with 5-fluorocytosine have been relatively insignificant and transient. Side effects serious enough to interrupt therapy are very rare. We did not recognize any side effects of significance in our five patients. The major problem with the drug has been the development of resistance as was noted in our first patient. The availability of sensitivity studies would be helpful in delineating those fungi-resistant before the start of therapy. The fact that drug sensitive isolates often contain sub-populations of much more resistant cells adds to the problem.[6]

The spectrum of inhibition[4] in a synthetic medium for Cryptococcus neoformans has been found to be in the range of 0.46-3.9 μg/ml for minimal fungostatic, and 3.9-15.6 μg/ml for fungicidal concentrations. Corresponding values for Candida albicans were 0.46-3.9 μg/ml and 15.6 μg/ml or greater respectively. Some Candida strains have MIF levels of 100 μg/ml.[7] The minimal inhibitory concentrations required for several Aspergillus strains tested[4] was 3.9 μg/ml or less, while the minimal fungicidal levels were much higher but are achievable with maximum doses of 5-fluorocytosine. Eighty-two per cent of the strains of Torulopsis glabrata were inhibited by 1.95 μg/ml or less.[4] The duration of therapy is quite variable, with courses as short as 30 days for Torulopsis infected patients to 90-180 days for patients with Cryptococcal disease.

An interesting experimental study reported by Lindquist *et al.*[8] demonstrated that 5-fluorocytosine reduced the mortality in mice from candidal infections in animals given azothioprine and dexamethasone from 50 to 4 per cent. After 30 days of therapy, 40 per cent of the untreated mice had high titer of organisms in their kidneys as against only 5 per cent in those given 5-fluorocytosine.

It is very difficult to evaluate the reports published as to the therapeutic efficacy of 5-fluorocytosine because patients with deep mycoses frequently are victims of other serious diseases, such as malignancies, and are often on chemotherapy. Vandervelde *et al.*[1] reported the treatment of 22 patients. Of eight with cryptococcal diseases, three were cured and three improved. Of eight with candidal diseases, four were cured and one improved. Five others were cured or improved with illnesses due to Torulopsis glabrata, Phialophora species, sporotrichosis, and Aspergillus fumigatus. Fass *et al.*[9] reported cures in two patients with cryptococcal meningitis who had become unresponsive to amphotericin B. There have been several scattered case reports of cures of fungemia due to Torulopsis glabrata. Recently, Atkinson and Israel[10] reported re-

covery or significant improvement in 12 of 13 patients with meningeal and pulmonary aspergillosis.

Concomitant use of 5-fluorocytosine and amphotericin B has been reported. Bennett[6] suggested that only combination therapy should be used in therapy of crytococcal meningitis, because of the risk of failure of 5-fluorocytosine alone and because emergence of drug resistance will negate future use of the combination. The conservative evaluation of the *Medical Letter* (14:29-30, 1972) still considers amphotericin B the drug of choice of all fungal infections. This is unquestioned in the majority of cases of the deep mycoses.

Summary

5-Fluorocytosine expands the armamentarium for treatment of certain of the deep mycotic infections. It is worth a trial in well chosen patients because of its distinct advantages of administration and its relative lack of serious side effects. The use of 5-fluorocytosine in combination with amphotericin B needs further consideration and evaluation.

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Diabetes Mellitus

(Continued from page 99)

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Abdominal Aortic Aneurysm

A New Diagnostic Sign

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ARTERIOSCLEROTIC ANEURYSMS are usually fusiform in shape and occur most commonly in the abdominal aorta between the renal arteries and the aortic bifurcation. The incidence in recent years has greatly increased and it is most common in males in the seventh decade. The normal course is slow progressive growth until rupture. Following the law of LaPlace, the tension in the wall will increase as the aneurysm enlarges, since the tension varies directly with the radius. Further stretching and expansion of the wall increases the radius causing more tension, and the process becomes self-perpetuating. For this reason, a small aneurysm is less likely to rupture than a large one, and virtually all abdominal aortic aneurysms will eventually rupture. Over 65 per cent of the patients will die within five years from the rupture of their aneurysm.[1] Elective surgery with resection of the aneurysm and graft replacement is choice treatment and can now be done with a mortality rate of about 7 per cent. At the present time, after surgical repair of the aneurysm, about 60 per cent will be alive after five years. An abdominal aortic aneurysm is a real threat to life, and the importance of early detection and elective surgery is emphasized since the surgical mortality rate at the time of rupture is 34 per cent.[2] Many centers operate on all aneurysms regardless of size and in the absence of symptoms, unless the risk is excessive. Others wait for increase in size and development of symptoms.

Most abdominal aortic aneurysms are asymptomatic, even when large. Some cause back and abdominal pain and vague intestinal complaints. An increase or sudden development of pain in the mid-abdomen, lumbar or pelvic regions portend rupture within hours to weeks, and surgery is imperative. The aneurysm may rupture into the abdominal cavity with rapid exsanguination, but most often it ruptures into the retroperitoneal space and the pain becomes very severe and boring, often along the left side of the spine. Because of tissue resistance, bleeding may be confined and localized, and symptoms may be present for hours or days without clear evidence of bleeding. A correct diagnosis is critical and becomes much more difficult when, because of tissue damage and destruction, there may be fever, leukocytosis, increased sedimentation rate in the presence of hypotension and a tender abdominal mass. The clinical picture has been mistaken for an intra-abdominal or retroperitoneal abscess with bacteremic shock, with the correct diagnosis made only postmortem.

The examiner should be alerted to the possibility of an aortic aneurysm in the routine abdominal examination especially in an elderly patient. The aneurysmal mass can be difficult to differentiate from other masses that may transmit pulsations. It is not uncommonly missed in an obese patient, or when the abdominal examination is cursory.[2, 3]

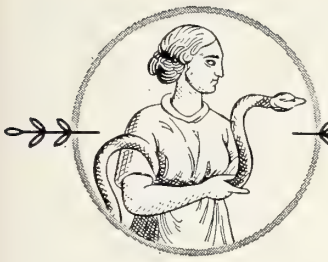
Abdominal aortic aneurysms are not uncommon and are potentially lethal. Early detection and elective surgery are stressed. The diagnosis is clinical and can be difficult. A physical sign is described that has been helpful in the diagnosis and is recommended as a routine in the examination of all pulsatile abdominal masses.

There are distinctive clinical features that point to the diagnosis. A mass is always present, and is located in the periumbilical area, slightly to the left of the midline. Pulsation is expansive, and in some patients a bruit might be present and femoral pulses may be reduced. If pulsations are absent, another cause of the mass should be sought. Anterior-posterior and lateral views of the abdomen confirm the diagnosis only when calcification is present to outline the mass. Aortography may not detect the aneurysm and can be falsely negative since the lumen is commonly filled with laminated thrombi and may not increase in size.

An additional physical sign that has been very useful in the experience of this examiner is that an abdominal aneurysm on bimanual palpation will not move cephalad or caudad in a longitudinal direction, since it is fixed and rooted proximally and distally as an integral anatomical part of the aorta. It will move only laterally on bimanual palpation. It is a very simple and valuable procedure and should be used routinely as an adjunct to the physical examination to characterize all pulsatile abdominal masses.

(Continued on page 15A)

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Medical HISTORY

Abraham Levinson, 1888-1955

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ABRAHAM LEVINSON was born on August 25, 1888, in Linkovia, Russia. He was graduated from the University of Illinois Medical School with the MD degree in 1911, and later obtained his BS from the University of Chicago, in 1917. He furthered his education at the University of Vienna and University of Berlin in 1914-1915, and again in 1923, 1928, and 1930. Some of the professors with whom he worked were Pirquet and Schick in Vienna, and Czerny and Finkelstein in Berlin.

Levinson began his academic career as an associate attending physician at the Sarah Morris Hospital for Children, the Michael Reese Hospital, in 1916. In 1923, he became attending physician, and in 1936 senior attending physician. His other affiliations were as attending physician at Cook County Hospital Children's Division in 1920, and chief of staff beginning in 1946. He founded the children's department of the Mt. Sinai Hospital in 1919, and was chief of staff from 1919 to 1943, senior attending physician from 1943. He held the position of professor of pediatrics and chief of the department of pediatrics at Cook County Graduate School of Medicine. First appointed to Northwestern in 1919, he rose to the rank of associate professor in 1943, professor in 1950, and emeritus professor in 1953.

Levinson was vice-president of the Michael Reese Hospital 1933-35, of the Mt. Sinai Hospital 1934-35, of the Chicago Pediatric Society 1935, and president of that society in 1936. He was a member of the American Academy of Pediatrics, the Chicago Medical Society, Illinois Medical Society, American Medical Association, Chicago Pediatric Society, Chicago Society of Medical History, American Association of Mental Deficiency, Scientific Exhibit Committee of the Pediatric Society of the AMA, and Sigma Xi. He was organizer of the Robert Sonnenschein Society of Medical History in Chicago, and chairman of the committee on mental hygiene of the Illinois Medical Society.

His awards were numerous and include the Certificate of Merit by the American Medical Association in 1932, for experimental studies in cerebrospinal fluid; Certificate of Merit from the Illinois Medical Society in 1936, for experimental studies in CSF, and in 1940 for an exhibit on cerebral manifestations in the newborn; the Grand Award of the Phi Lambda Kappa in 1940, for outstanding achievement in medical science, and the "orator key" for the history of medical society of Tulane University in 1942.

Levinson was also a founder. He established a neuropsychiatric service in the Children's Division of the Cook County Hospital.

In 1912, Levinson married Ida Perlstein and they had three children: Myrtle, a child psychologist; Judith, a teacher; and Julian, a pediatrician. In 1950, the son Julian died. Levinson founded and was director of the Dr. Julian Levinson Research Foundation for clinical and laboratory studies of mental retardation.

Levinson made extensive travels to Europe and the Far East; these were made primarily for medical study. His hobbies included collecting of unusual slides on pediatric and general medical history. Further interests were born on his travels. In these countries he learned the customs, language, and literature.

Levinson was a distinguished clinician in diagnosis and judgment; he was a distinguished teacher and attracted medical men from all over the world to his rounds.

Levinson was also an author. He wrote over 200 articles on pediatrics and a number of books. His greatest book was *Cerebrospinal Fluid in Health and Disease,*

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written in 1919, and was the first book on the subject to appear in English. It underwent two further editions in 1925 and 1929. *The Examination of Children* followed in 1923, with a second edition in 1927. This was written for students and practitioners on clinical and laboratory methods in pediatrics. *Pediatric Nursing* was written in 1925, and underwent two other editions —1933 and 1945. This book was translated into Hebrew by M. Temkins and A. J. Levy. *Tuviah Horefeh* was written in 1923. It describes the work of Tobias Katz (1652-1729), a wandering physician. *Pioneers of Pediatrics,* another contribution to medical history, was written in 1936, and underwent a second edition in 1943. This book described the leaders of pediatrics from all over the world. *The Mentally Retarded Child* was written in 1952 as a guide for parents.

He contributed to a number of books on many topics: on milk and infant feeding in Heineman's *Milk* (1919); on cerebrospinal fluid in Abt's *Pediatrics* (1923); on meninges in *The Physical and Mental Growth of Prematurely Born Children* by Hess, Mohr, and Bactelme (1934); on tuberculous meningitis in Goldberg's *Clinical Tuberculosis* (1935); on cerebrospinal fluid and on meningitis in Brennemann's *Practice of Pediatrics* (1937, 1939, 1940, 1942, 1948); on development of infants in *Our Babies* (1935); on meningococcemia in Tice's *Practice of Medicine* (1947).

His papers dealt with every aspect of pediatrics, and 34 papers were on medical history, although the research which gained him his fame was in pediatric neurology. Friedman described Levinson's research:

> His investigations on diphtheria, cranio-tabes, influenza, and tuberculosis have withstood the test of time. His experimental study of the role of the liver in hippuric acid synthesis has been noteworthy.
>
> Dr. Levinson's most fundamental research has been in the realm of pediatric neurology. His work on cerebral hemorrhage of the newborn, on hemorrhagic encephalitis, localized meningitis, tuberculous meningitis, lead encephalopathy, acute transitory neurologic manifestations, pneumoencephalography, convulsions and psychologic studies of the sick child have won him international recognition.
>
> Dr. Levinson's name is closely associated with pioneer work on cerebrospinal fluid, for there is hardly a phase of the subject to which he has not made some valuable contribution. He was the first to describe the foam formation in pathologic fluid, the pH, the cataphoresis changes, and enzymology in various types of fluid. He has also described the cell-bacteria ratio in the cerebrospinal fluid of meningitis, the differences in the lumbar and cisternal csf and the desquamated endothelial cell known as the Levinson Cell.

At the time of his death, Levinson was writing a book on mental retardation, which was finished by Dr. John Bigler.

Levinson was, in addition, an editor of journals: associate editor with Abt of the "Pediatric Year Books," 1916-1920; editor of the Spivak Memorial Issue, 1927; editor in chief of "Medical Leaves," 1939; on the advisory council of "Medical Leaves," 1940-43; a member of the editorial board of Victor Robinson Memorial Volume, "Essays on the History of Medicine," 1948; editor of "Modern Medicine" and "Nation's Health."

There are several tests, syndromes, and instruments that bear his name: for example, the Levinson test for the diagnosis of tuberculous meningitis, a method of quantitative glucose determination of the cerebrospinal fluid, the neurologic syndrome of the newborn, the auscultation phenomenon of the larynx, a tongue depressor for infants, and a spinal puncture needle and manometer.

Levinson was Jewish, and he devoted much of his work to the Jewish people. As mentioned above, he founded Mt. Sinai Hospital. He also wrote a paper on "Jewish Physicians of the Middle Ages" in 1937.

In 1949, Levinson's colleagues honored him on his 60th birthday. Dr. Isaac A. Abt acted as honorary chairman of the celebration committee; and Dr. Ruben Friedman, of Philadelphia, acted as chairman. A volume was published in his honor under the editorship of Solomon R. Kagan. This book contained original contributions by leading physicians in the United States, including an appreciation of Levinson.

Friedman wrote of Levinson:

> Dr. Abraham Levinson is one of the most beloved physicians of this generation. His humanitarianism has won for him the gratitude of thousands of patients in both private and hospital practice. As chief of staff of the Cook County Children's Hospital and as a senior attending physician at the Sarah Morris and Mt. Sinai Hospitals, he has spared neither time nor energy in serving the children of the poor and underprivileged without distinction of race or creed.
>
> He is, in addition, a man of great and varied culture, and above all, a person of high ideals and warm personal charm, beloved and admired by all who knew him.

I. S. Abt paid the following tribute to Levinson in 1948:

> I recall very well in the early years of your practice when you called me in consultation to see a sick child. I was immediately impressed by your lucid history of the case, and the careful work and thought you had shown in treating the child, and my immediate reaction was, "there is a promising young doctor." Through all the years that have elapsed since 1911 when you graduated, I have been able to follow your progress, and I must say that you have never disappointed me in your true worth.

Levinson died on September 17, 1955, but his contributions gained a place for him in the archives of great pediatricians.

The President's Message

United We Stand



Consider the following:

Medicare and Medicaid
Professional Standards Review Organization
Utilization Review
Health Maintenance Organizations
Health Systems Areas and Agencies
Relicensure and Recertification
Claims-made Professional and Liability Insurance

Each of the foregoing embodies a fact of life not even considered by most physicians a dozen years ago. The pace of new legislation, bureaucratic Apocrypha, and sweeping change in the social and economic environment of medical practice can only accelerate—and lead all too frequently to contradiction, dispute, and waste of precious resources.

For many physicians, bewildered and defensive, accommodation to this clash and clang has been slow, incomplete, and often painful. Extremists in our own ranks are having a field day—at both ends of the field!

Most of us, however, stand together in the middle searching for that reasonable course of action which will preserve the essential prerogatives and high traditions of a noble profession while we respond to the best of our abilities to the genuine needs of our patients and fellow citizens for both a high standard of medical care and medical leadership toward a variety of accessible and affordable health care arrangements which reflect our still free society.

To accomplish such leadership, physicians need an effective instrument of positive expression—one which speaks for the majority of the profession with vigor, authority, and honesty. Your Kansas Medical Society should be that instrument through which you can make known both your concern for your patients and your pride in your profession. It will be just as effective on your behalf as your active participation permits it to be.

In the next two months, as the issues we confront define the hard tasks ahead, your Society will need to call on many of you to serve actively on the commissions and committees which carry the burden of our work. I would be delighted to learn from each of you of your desire to serve and your area of interest. Please write me. When you are called, please respond in the affirmative.

Make your convictions count!

John W. Travis M.D.

President



Editorial COMMENT

A Striking Example

What has been described as "the nation's first major strike by physicians" (though lesser ones have occurred) has been concluded with apparent all-out victory for the strikers. In this case, the contention was between the Committee of Interns and Residents in New York (read labor) representing housestaffs and the League of Voluntary Hospitals (read management). Which are the guys in the white hats and which in black we haven't decided yet, having some sense of identification with both sides, but if the victory is as claimed, the Is and Rs must be the good guys because, as we all know, virtue always prevails.

At any rate, it has happened and if the foundation has shifted a little, the walls of the temple haven't split wide open. True, the event had some differences from the picture conjured up by the term "physicians' strike." Our prosaic mind, so stimulated, sees militant, placard-bearing physicians on the march, chanting, "Hell, no! We won't go!," while their pinched-faced and beshawled families pose for the news photographers and forlorn patients panic at the realization that their saints have gone marching out. Being the product of an earlier day, we have never really believed a significant number of physicians would be able to turn their backs on their patients long enough to achieve whatever professional or financial goal was sought. As a matter of fact, that belief isn't entirely shattered since, when it finally came, the event was somewhat different.

First of all, the adversary was not (directly, at least) the patient moaning in distress, shaking with fever, or pouring out his life's blood. It was a depersonalized "League" representing the power of the hospitals and, therefore, playing Goliath to the housestaffs' David. The sanctity of the physician's commitment to his patient was not threatened as much as the hospital routine. We note, for instance, that the leader of the strikers reported that the attending physicians were begging them to return. Now this we *can* identify with since, in the event, we would be one of the latter and we wonder (not having been privy to the negotiations) if the old men (and women) who were chasing their stethoscopes around the halls didn't have a lot to do with pressing the hospitals toward the reportedly "incredible" success of the insurgents in gaining their objectives.

We wonder, therefore, what influence it had on the strikers' willingness to leave their posts to know that those old men (and women) would be on hand to provide some degree of care. In other words, we still have trouble bringing into focus the picture of the physician, in the interest of solidarity toward some administrative benefit, turning his back on his individual and personal patient. The medical striker will, by the nature of his function, always differ from his laboring colleague in the pits or on the assembly line and we suspect, even though the assurance is always given that emergency care will be provided, that the strikers' courage will be tested by the question of whether those patients, more than routine but less than emergent, are going to be provided with some care in their absence. The coal waits in the mine, the parts wait to be put together, but the patient—?

The whole thing, however, must be taken in the context of the times. Unionization of physicians is here though far from complete. Certainly the various physicians' unions will cheer the effectiveness of the housestaffs' efforts, but the impact of the experience is not yet clear. On the one hand, it is claimed that the strikers' victory will give other hospitals and employing groups pause and make them more amenable to demands, thereby obviating future strikes. On the other hand, experience suggests that, the precedent having been established, similar actions will come more readily. It is notable, too, that when the step was taken, it was youth that took it.

We have never subscribed to the attitude that the current crop of fetal physicians is greatly different

(other than the marital rate and hirsutism) from its parents. We still believe them no more or less capable, highly motivated or idealistic than the vintage of 30 or 40 years ago. (Judging by the frequently published interviews with medical school aspirants, the ghettos, reservations, and hill villages are going to be overrun with physicians one of these days.) If the staff negotiators point with pride to their accomplishment in obtaining assurance of salaries ranging from $15,000 for interns to $22,500 for third-year residents (with additional increases in the offing), they should recall that some other forces must have been at work in the last few decades to move from the room-board-laundry-and-be-glad-you're-here status of their parents' day to the current standards of remuneration—not just superior ability and dedication. Even if they tire of hearing of the old days, they should understand that backs ached at the bedside, lids drooped in surgery, and night phone calls jangled as loudly in those days, and it certainly seems from the other side of the hill that 15 grand or more would be revivifying.

They are right, of course, in their contention that a dog-tired intern or resident is not as capable or effective as one who is rested. We just supposed that learning to go without rest and money was part of the conditioning. The attending staff didn't think of us as being tired and poor—just dumb.

But this is a different day. No longer is the alleged value of the house service inversely proportional to the financial recompense thereof. "Interns can't take money" was the keynote of that day and whatever doubts patients had about their care, they believed that totally. Today, the right to a living wage and almost human hours is a part of the total social picture. The present trend toward a more human approach in the care and feeding of housestaffs has been reached partly because the earlier attitude could not be maintained and partly because of the phenomenal gains in reward and working conditions made by all service entities in recent years. Nothing could be more ridiculous than to discount the desirability of such gains just because we were born 30 years too soon. At the same time, it is not unreasonable to speculate, on a broader level, what the not inconsiderable sums now necessary to maintain housestaffs are contributing to the overall health care costs and suggest to our junior partners that when the critical spotlight shines on the practicing physicians, they share it with us.

Beside salaries and hours, the other issue resolved to the housestaffs' satisfaction was something called "out-of-title" work which is negotiating-table talk for scut work. Now the elimination of this we hail with joyful noise muted only by some doubt that such a life can ever be. This must be why the strike leaders described their accomplishments as "incredible." We congratulate them on this victory but pass on the curmudgeonly warning that there will be plenty of it waiting for them when they get out.

And we do congratulate them. For a generation so vocally committed to the betterment of mankind and so critical of the alleged materialism of their elders, they are doing right well for themselves. We do warn them that, in their negotiating zeal, too much success may make for a comedown when their housestaff days are over. And we do urge them to stand up for their rights and just remuneration in the context of the day. A glance at the socioeconomic weather predictions would indicate they are going to have to pay for them. —*D.E.G.*

CME SURVEY TEAM ACCREDITS FOUNDATION

The Hertzler Foundation and Halstead Hospital in Halstead, Kansas, became the first accredited continuing medical education-producing agency in Kansas, with its accreditation approved on February 12, 1975, by the Continuing Medical Education Committee of the Kansas Medical Society. The survey team was composed of team chairman, R. D. Linhardt, M.D., Wichita; Roscoe F. Morton, M.D., Arkansas City; and Alex C. Mitchell, M.D., Lawrence. Acting as consultants to the survey team were Rutledge Howard, M.D., AMA, and Jesse D. Rising, Kansas City.

During survey, the team observed educational programs on the "Medical Problems of the Older Patient." In addition, the survey included interviews with the chairman of the local continuing education committee, Edward O. Treesh, Ph.D., and the following members of the local committee: V. J. Boudreaux, Jr., M.D.; Irene A. Koeneke, M.D.; Charles R. McReynolds, M.D.; Robert G. Rate, M.D.; and Robert P. Stoffer, M.D.

Provisional accreditation was granted for a period of one year, and the educational programs presented by the Foundation and Hospital will qualify for Category I credit, if they meet other AMA requirements for that particular category.



The New UR Regs and PSRO

Henry E. Simmons, M.D., is the Deputy Assistant Secretary for Health and the Director of the Office of Professional Standards Review, Department of Health, Education and Welfare. The following is a statement by Dr. Simmons from his speech before the National Professional Standards Review Council meeting on December 16, 1974:

"With the publication of the new Utilization Review Regulations of November 29, 1974, there has been confusion regarding the relationship of these requirements to the PSRO program.

"The final UR Regulations are intended to be compatible with and supportive of the PSRO program and have been designed to permit an orderly transition to the operation of PSROs throughout the country. Nationwide review under the PSRO program, however, is still at least several years away. In the interim, these new regulations require improvements in review conducted by hospitals participating in Medicare and Medicaid where there is no Conditional PSRO designated.

"The same statute that contained the PSRO provision required the improvements in Utilization Review implemented by these regulations.

"PSRO is a voluntary program. In those geographic areas where Conditional PSROs are designated, the PSRO review system takes precedence. Under PSRO many hospitals can still be delegated review responsibilities provided they demonstrate capability and willingness. However, the PSRO makes the delegation decisions and retains ultimate responsibility for effective review regardless of whether hospitals receive full, partial, or no delegation. PSRO Transmittal #11* outlines the procedures to be followed by a PSRO in carrying out hospital assessment activities leading to decisions regarding delegation of review.

"The new Utilization Review Regulations apply to hospitals in those geographic areas where no Conditional PSRO has been designated or where physician groups have not elected to form a PSRO. The regulations do require that hospitals participating in Medicare and Medicaid develop and operate an internal system for utilization review which is virtually identical with the PSRO hospital review system. Effective operation of this UR system should facilitate transition to the PSRO system once a Conditional PSRO is designated for the area.

"Once a Conditional PSRO is designated, assumption of responsibility for hospital review is determined by the PSRO formal plan and the Memoranda of Understanding developed between the Medicare intermediaries and the Medicaid state agency. These Memoranda in conjunction with the PSRO hospital delegation process delineate the timetable and conditions under which responsibility will be assumed by the PSRO for each hospital in its area.

"Where Conditional PSROs have already been designated and are operating their review system, the Memoranda of Understanding which are or will be developed between the PSRO and the other agencies clearly specify the primary responsibility of the PSRO for all review activities in the area. These agreements are in no way weakened or otherwise modified by the new UR Regulations.

"Even with the new UR Regulations, the advantages of the PSRO system still pertain. UR committees continue to make recommendations to fiscal agents. Only under PSRO is final decision making responsibility transferred to the physician group and only under PSRO is there the opportunity to build a community-wide system of peer review for services in all settings.

"It continues to be the objective of the Department that PSROs be the ultimate system of review. We are committed to the concept that quality assurance through peer review is the most effective way to assure appropriate use of federal health dollars. In this context, we see the new regulations for utilization review as a major step forward in achieving the success of that concept and in accelerating the development of the PSRO program."—*J.E.A.*

* In Kansas, the KFMC sent PSRO Transmittal #11 to all hospitals on January 27, 1975.

Medical-Legal Page

$4,025,000 Malpractice Verdict For Mute and Paralyzed Child

A $4,025,000 malpractice verdict against a school district, a hospital, and a physician was not excessive, a California appellate court ruled. The patient, an 11-year-old boy, suffered total paralysis from the neck down and was unable to speak.

The boy had suffered a head injury in a fight on a supervised school playground. The supervisor was inside the building when the fight began. About two hours after the fight, the youth was taken to a hospital emergency room, where an intern and a resident physician concluded that he should be admitted to the hospital for observation.

Someone in the admissions office incorrectly told the intern that the youth could not be admitted because he was not being treated by a private physician with staff privileges. A staff physician in the emergency room then talked with the youth's father and decided that the father could take his son home and observe him. The physician did not give the father a head injury sheet listing seven symptoms to watch for. At the time the youth was released from the hospital he already exhibited five of the seven symptoms.

When the youth's condition continued to deteriorate, his father rushed him back to the hospital. Intracranial bleeding was discovered and a neurosurgeon was called. He operated to remove a blood clot and stop the bleeding. The youth survived the operation but was left mute and totally paralyzed from the neck down. His mental capacities were unaffected.

Negligence claims were brought against the school district for improper supervision of the playground and against the staff physician and hospital for improper treatment. There was testimony that the youth would have fully recovered had he been properly treated at the time he was first taken to the emergency room. The trial court awarded him $4,025,000, assessing damages of $25,000 against the school district and $4,000,000 against the physician and hospital.

On appeal, the California appellate court said that the jury had been properly instructed on the issue of liability. There were two separate torts involved, the court said. The jury had assessed the damages against the defendants, and the determination that there were two separate and distinct torts was supported by the evidence.

Reviewing the amount of damages, the appellate court said that the award of damages was not excessive. The award included the discounted present value of lost future earnings, past and future medical expenses, the cost of medical supplies and equipment, tutoring and instruction and attendant care, as well as general damages. Considering the youth's condition, the award of damages was not excessive, the court concluded.

Finally, the court found that the hospital and physician did not have standing to attack the award of attorneys' fees of 25 per cent of the recovery. The amount of attorneys' fees awarded did not affect their interest, the court concluded in affirming the trial court's decision.—*Niles v. City of San Rafael,* 116 Cal. Rptr. 733 (Cal.Ct. of App., Oct. 2, 1974)

Editor's Note: A prior decision in this case was reported in *The Citation,* Vol. 28, No. 4, p. 49.

Physician's Emergency Diagnosis Held Not Negligent

A physician who examined an accident victim and made a diagnosis of a broken hip and a broken arm, when in fact the patient had suffered a broken neck, was not guilty of negligence, a Louisiana appellate court ruled.

The patient had been injured in an automobile accident and was taken to a hospital by ambulance. A general practitioner who happened to be at the hospital examined him without removing him from the ambulance stretcher and without the benefit of X-rays. He diagnosed a facial laceration, a broken hip, and a possible fracture of the right arm.

After talking to the patient's mother, a nurse, the physician ordered the patient, who had undiagnosed cervical fractures, transferred to another hospital. No precautions such as immobilization or sandbagging were taken and no attendant rode with the patient in the back of the ambulance.

Claiming that the physician was negligent in failing to discover the cervical fractures and take proper precautions to guard against aggravating the injury, the patient sued the physician. He also brought a negligence action against the driver of the car in which he was riding at the time of the accident. The jury found that the physician was not negligent, but awarded the

(Continued on page 15A)

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This month's articles are reprinted from Vol. 30, No. 7, January 15, 1975.

Vox Dox

Vox Dox Editor:

There has been much discussion recently regarding the adequacy and emphasis of the preparation in training programs for pediatric practice. During a two-year period (July 1971-1973), all patients in a small community were seen by a single pediatrician and their diagnoses entered by him in a prospective manner to document the spectrum of disease encountered. During this period, 13,410 patient visits occurred, which represented the following:

Infectious Diseases		6,169	46%
Upper respiratory infections	1,904		
Otitis media	1,738		
Gastroenteritis	435		
Pinworm infestation	363		
Pneumonitis	239		
Conjunctivitis	212		
Other	1,278		
Accidents		1,284	10%
Nonfracturing trauma	453		
Lacerations	298		
Fractures	124		
Animal bites	107		
Other	302		
Emotional Problems		1,208	9%
Behavior problems	278		
Psychosomatic complaints	183		
Other	747		
Well-baby and child care		1,016	8%
Allergies		955	7%
Asthma	326		
Other	629		
Dermatologic		620	5%
Atopic dermatitis	161		
Contact dermatitis	138		
Other	321		
Other		2,190	15%
Ear	536		
Urology	268		
Cardiology, neurology, endocrine	402		
Gynecology, growth problems, gastrointestinal, eye, nontraumatic orthopedic, drug reactions, connective tissue, venereal, poisonings, congenital anomalies, hematologic	984		

RONALD D. GREENWOOD, M.D.
Salina, Kansas
(Present address: 300 Longwood Ave., Boston, Mass. 02115)

Vox Dox Editor:

Re: The Polls Parade

The objection I have to PSRO is that it nullifies the contract between the patient and the doctor. The patient is not able to get medical care except as it fits the "standard." The physician no longer can treat his patient as a patient, but he must treat him as a disease and must follow the "standard." Of course, he is still legally accountable for anything that might go wrong. Even though the statistics show that such and such a disease requires a certain range of hospital days in *uncomplicated* cases, the physician who keeps his patient longer than a certain percentile must justify that additional stay by finding some complication or reason. That just doesn't make sense.

The outcome is that the patients who have a large investment through insurance or taxes desire to get the most out of their investment. On the other hand, the government or insurance insists on continually reducing the cost of medical services.

Now try to practice medicine in that environment. Of course, one must consider that practicing medicine is having a patient face-to-face with a problem in the here and now, and having to decide what to do. Practicing medicine is not looking back on that patient and deciding what you did right or wrong, or what you should or shouldn't have done.

A. T. REECE, M.D.
Gardner, Kansas

Letters to VOX DOX should be addressed to the Vox Dox Editor, Journal of the Kansas Medical Society, 1300 Topeka Avenue, Topeka, Kansas 66612.

KMS Obituaries

HAROLD R. BARNES, M.D.

Dr. Harold R. Barnes, 74, of Hutchinson, died February 22, 1975. He was born in Hiawatha, May 10, 1900.

Dr. Barnes was graduated from the University of Kansas School of Medicine in 1926. After completing his internship he established his medical practice in Hutchinson, in 1927, where he practiced until retirement in 1973.

Surviving are his wife, two daughters, and a son.

PORTER M. CLARK, M.D.

Dr. Porter M. Clark, of Independence, died January 23, 1975, at the age of 77. He was born May 16, 1897, in Empire City.

Graduating from the University of Kansas School of Medicine in 1932, Dr. Clark established his medical practice in Independence the following year until his retirement in 1973.

Survivors include his wife, two sons, and a daughter.

MAYRO O. HEDGE, M.D.

Dr. Mayro O. Hedge, 87, of Kansas City, Kansas, died January 23, 1975. He was born in Pittsville, Missouri, September 14, 1887.

Dr. Hedge was graduated from the Eclectic Medical University, Kansas City, in 1914. He practiced medicine in Kansas City.

Surviving Dr. Hedge are his wife, four sons, and two daughters.

FRANCIS D. KENNEDY, M.D.

Dr. Francis D. Kennedy, of Norton, died February 8, 1975, at the age of 84. He was born in Des Moines, Iowa, September 22, 1890.

Dr. Kennedy was graduated from the Drake University College of Medicine, Des Moines, in 1913. He established his medical practice in Kansas the following year, and practiced continuously until 1965.

JOHN H. LATHROP, M.D.

Dr. John H. Lathrop, of Scott City, 58, died January 27, 1975. He was born March 29, 1916, in Norton.

Dr. Lathrop was graduated from the University of Kansas School of Medicine in 1942. He established his medical practice in Kansas in 1946.

Surviving Dr. Lathrop are his wife and four daughters.

IMMUNIZATION SCHEDULE

The School Health Committee of the Kansas Medical Society has been requested to list an immunization schedule. Following is the recommended schedule for active immunization of normal infants and children as listed by the Committee on Infectious Diseases of the America Academy of Pediatrics, 1974:

RECOMMENDED SCHEDULE FOR ACTIVE IMMUNIZATION OF NORMAL INFANTS AND CHILDREN

2 mo	DTP[1]	TOPV[2]
4 mo	DTP	TOPV
6 mo	DTP	TOPV
1 yr	Measles[3]	Tuberculin Test[4]
	Rubella[3]	Mumps[3]
1½ yr	DTP	TOPV
4-6 yr	DTP	TOPV
14-16 yr	Td[5] and thereafter every 10 years	

1. DTP—diphtheria and tetanus toxoids combined with pertussis vaccine.
2. TOPV—trivalent oral poliovirus vaccine.
3. May be given at 1 year as measles-rubella or measles-mumps-rubella combined vaccines.
4. Frequency of repeated tuberculin tests depends on risk of exposure of the child and on the prevalence of tuberculosis in the population group. The initial test should be at the time of or preceding the measles immunization. Do not give the tuberculin test within 30 days after giving the measles vaccine.
5. Td—combined tetanus and diphtheria toxoids (adult type) for those more than 6 years of age. Tetanus toxoid at time of injury: For clean, minor wounds, no booster dose is needed by a fully immunized child unless more than 10 years have elapsed since the last dose. For contaminated wounds, a booster dose should be given if more than 5 years have elapsed since the last dose.

An acute febrile illness is reason to defer immunization until the subsequent visit or until an infection is properly controlled. Minor infections not associated with febrile reactions, such as the common cold, are not contraindications. Interruption of the recommended schedule, with a delay between doses, does not interfere with the final immunity achieved; nor does it necessitate starting the series over again, regardless of the length of time elapsed.

A number of immunizing agents are not recommended for ordinary use, but their use may be highly advantageous under unusual circumstances. Examples include smallpox vaccine for foreign travel or for hospital personnel, diphtheria toxoid during an outbreak, influenza virus vaccine for infants and children at high risk, and BCG for infants possibly exposed to tuberculosis.

G. William Nice, M.D., Chairman
School Health Committee



Pro-Banthine®
brand of
propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted. Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

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San Juan, Puerto Rico 00936

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"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action—Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action—Pro-Banthine helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action—Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action—Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

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(propantheline bromide)

a good option in peptic ulcer

In most cases of sustained moderate hypertension,

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usually offers more than effective lowering of blood pressure...

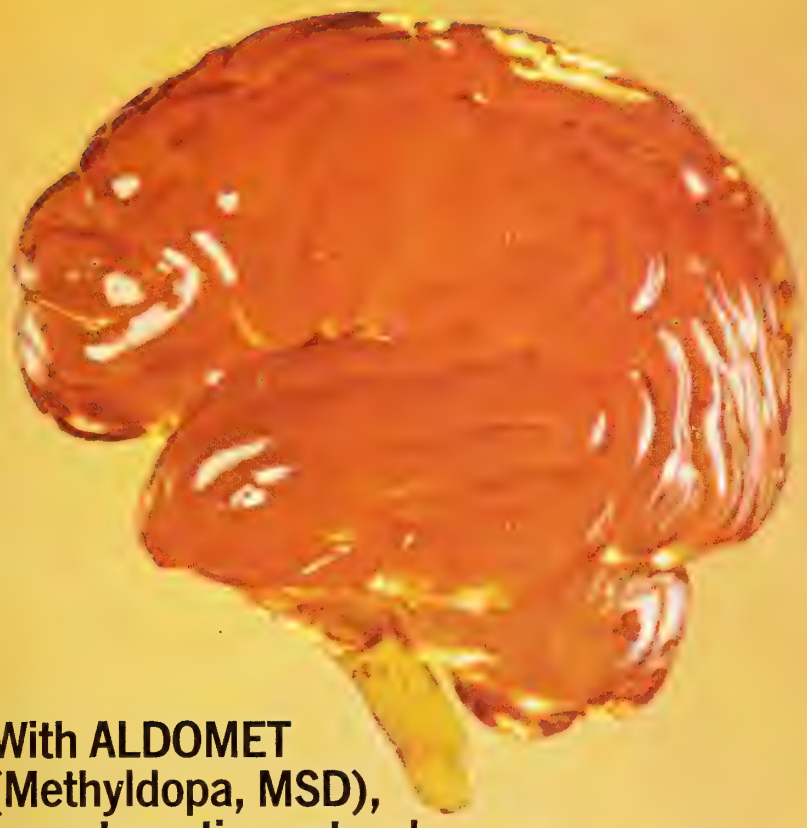


With ALDOMET (Methyldopa, MSD), existing renal function is usually unchanged

ALDOMET has no direct effect on renal function. When used in effective doses, ALDOMET usually does not reduce glomerular filtration rate, renal blood flow, or filtration fraction.

With ALDOMET (Methyldopa, MSD), cardiac output is generally unchanged

ALDOMET has no direct effect on cardiac function. When ALDOMET is used in effective doses cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is slowed.



With ALDOMET (Methyldopa, MSD), symptomatic postural hypotension is infrequent

ALDOMET reduces both supine and standing blood pressure. Less frequent symptomatic postural hypotension is experienced with ALDOMET than with many other antihypertensive agents. Exercise hypotension and diurnal blood pressure variations rarely occur.

for sustained moderate hypertension

TABLETS, 250 mg and 500 mg

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a unique antihypertensive agent

Contraindications include active hepatic disease and known sensitivity to the drug. Use with caution in patients with a history of liver disease or dysfunction. Not recommended in pheochromocytoma or pregnancy.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

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For a brief summary of prescribing information, please see following page.

addendum

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to further simplify therapy for many patients

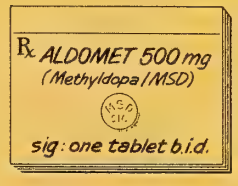
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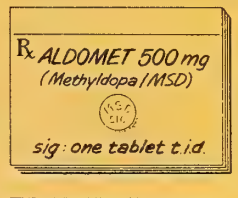
Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day.

Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

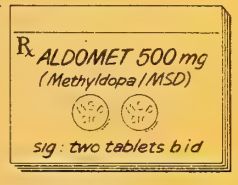
1.0-g daily dose =

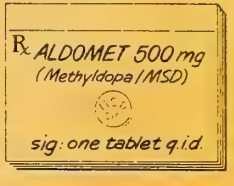


1.5-g daily dose =



2.0-g daily dose =





NOTE: Tablets shown are not actual size.

in sustained moderate hypertension

ALDOMET® (METHYLDOPA|MSD)

usually lowers blood pressure effectively



Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyldopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur; if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatus, and diarrhea occur occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic; if edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3:0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

□ Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
□ Can relieve nausea and vomiting often associated with vertigo.*
□ Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
□ Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
□ Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

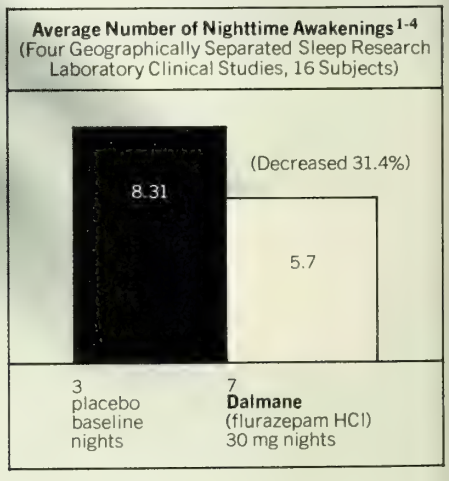
Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*



Would sleep with fewer nighttime awakenings benefit your patients with insomnia?

Highly predictable results for your patients with trouble staying asleep...

...can be obtained with Dalmane (flurazepam HCl). As shown below, Dalmane significantly reduces nighttime awakenings:[1-4]



And for those with trouble falling asleep or sleeping long enough...

...Dalmane (flurazepam HCl) also delivers excellent results. Clinically proven in sleep research laboratory studies: on average, sleep within 17 minutes that lasts 7 to 8 hours.[5]

Dalmane (flurazepam HCl) is relatively safe, seldom causes morning "hang-over"...

...and is well tolerated. The usual adult dosage is 30 mg *h.s.*, but with elderly and debilitated patients, limit the initial dose to 15 mg to preclude oversedation, dizziness or ataxia. Evaluation of possible risks is advised before prescribing.

REFERENCES:

1. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
2. Frost JD Jr: A system for automatically analyzing sleep. Scientific exhibit at the 24th annual Clinical Convention of the American Medical Association, Boston, Nov 29-Dec 2, 1970; and at the 42nd annual scientific meeting of the Aerospace Medical Association, Houston, Apr 26-29, 1971
3. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
5. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

Depend on highly predictable results with

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.*— usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.



specifically indicated for insomnia

Objectively proved in the sleep research laboratory:

- **sleep with fewer nighttime awakenings**
- **sleep within 17 minutes, on average**
- **sleep for 7 to 8 hours, on average,**

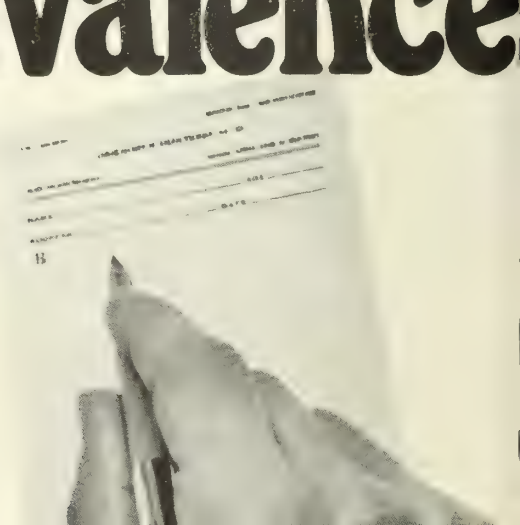
with a single *h.s.* dose.

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Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Bioequivalence



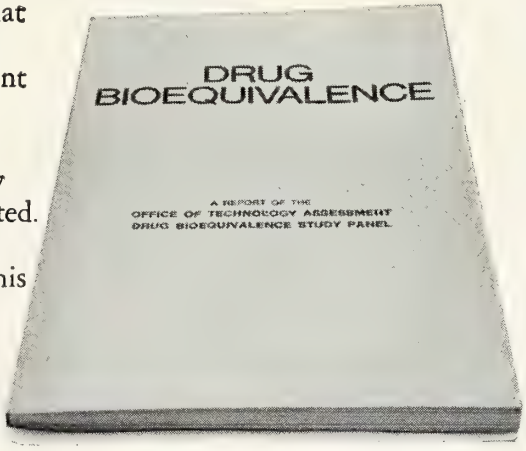
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription

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GREEN AND BLUE EGGS

Believe it or not—there is a breed of chicken that lays its own colored Easter eggs, in colors ranging from medium blue to medium green.

These are a breed of South American chickens known as aracuna. And they actually do lay colored eggs.

Some claims have recently been made that the aracuna eggs are better for the diet than regular eggs, but these claims have not been substantiated, says a communication in the *Journal of the American Medical Association.*

The report cites a study by the Iowa State College Department of Poultry Science for the American Egg Board, which indicates that the color of the egg shell does give some indication of its cholesterol content. The dark-shell eggs have slightly higher cholesterol content.

The *JAMA* report also pointed out that eggs with a slightly higher polyunsaturated fatty-acid content have been produced in the United States by hens fed diets containing polyunsaturated vegetable oils. Certain health claims have been made for these eggs, but actually they are not very much different from regular eggs, says the communication.

ASPEN MUSHROOM CONFERENCE

The Aspen Mushroom Conference is designed for physicians, scientists and amateur mycologists interested in the identification, toxic, and hallucinogenic properties of mushrooms. The Conference is sponsored by the Beth Israel Hospital, Denver, and the Colorado Mountain College, Glenwood Springs, Colorado, and will be held at the Hotel Jerome, Aspen, Colorado, August 11-15, 1975.

An outstanding group of Colorado and visiting mycologists and physicians will serve as a faculty for the Conference. Didactic sessions and refresher courses on mushroom identification will be held in the early mornings and late afternoons at the novice and advanced student levels. Group discussions on advances in the diagnosis and treatment of mushroom poisoning will be offered to physicians and others interested in this subject. Generally, in the late summer, the Aspen mountains are richly productive of a wide variety of mushrooms. Experienced leaders will conduct daily forays into the surrounding mountains to collect edible and poisonous species and study their field characteristics.

For further information write to: Aspen Mushroom Conference, Registration Division, 3300 South Wabash Court, Denver, Colorado 80231.

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Month in Washington

The House Health Subcommittee has approved a health manpower bill authorizing $1.7 billion over three years to support medical and other health profession education.

Under the proposal similar to the House-passed bill last year, medical schools would receive capitation support of $2,100 for each student for 1976 and 1977, with support decreasing to $2,000 per student in 1978. The bill provides a simple extension of present health manpower authority for this year.

Medical schools would be required to either increase their enrollment or provide for remote site training for at least 50 per cent of their students in their last two years of medical school education. Medical students would be required to pay back to the US Treasury, capitation amounts paid to schools on their behalf, but would be given capitation payback forgiveness, on an equal year-for-year basis, for time spent in the National Health Service Corps or service in private practice in medically underserved areas.

Approved medical residencies could not exceed 155 per cent of the previous year's graduating class starting in 1978, as a restriction on foreign medical graduates. In 1979 and 1980, limitation would decrease to 140 per cent and 125 per cent. The Coordinating Council on Medical Education could administer the residency limitation, but if it does not agree to accept such administration, the government would do so.

Designated as primary care specialties would be general and internal medicine, pediatrics, family medicine, and obstetrics and gynecology.

Sen. Edward Kennedy (D.-Mass.) has introduced four bills dealing with health manpower, including his sweeping plan of last year calling for mandatory service and licensing and re-licensing. This was rejected in the last Congress by the Senate in favor of Senator J. Glenn Beall's (R.-Md.) more limited plan. House and Senate could not reach agreement on the legislation last year.

Health care spending in the United States climbed over $100 billion for the first time in fiscal 1974, which ended last July 1. Public spending increased twice as fast as private spending.

A study, National Health Expenditures, published in a recent edition of the Social Security Bulletin, noted that the $104.2 billion health care bill represented a 10.6 per cent increase over the $94.2 billion spent in fiscal 1973.

Public spending amounted to $41.3 billion, or 39.6 per cent of the 1974 total, an increase of 15.3 per cent, or $5.5 billion. Private spending—mainly private insurance and out-of-pocket payments—accounted for $62.9 billion, or 60.4 per cent of the total health care expenditures for 1974. This was up 7.7 per cent, or $4.5 billion, over fiscal 1973.

Despite the dollar increases, health spending remained at the 1973 proportion of gross national product—7.7 per cent. Health spending averaged $485 per person.

Hospital care was the largest expenditure category, amounting to $40.9 billion, or 39 per cent of the total. Physicians' services accounted for $19 billion, or 18 per cent. Expenditures for nursing home care reached an estimated $7.5 billion.

Of all personal health care spending in 1974, the government accounted for 38 per cent; private health insurance, 26 per cent; and philanthropic organizations, 1 per cent, out-of-pocket spending accounted for the remaining 35 per cent. Increases in Medicare and Medicaid expenditures accounted for most of the increase in the public share of health care expenditures.

The government has abandoned a long fight to classify high potency vitamins as drugs, bowing to opponents of vitamin legislation in Congress. Vitamin products will be available over-the-counter in any strength less than toxic, according to Food and Drug Administration officials. The Agency had hoped to require drug classification for vitamins exceeding 150 per cent of the recommended daily allowance. This and other proposed restrictions on vitamins had prompted a storm of protest to Congress from health food users and makers. The Senate last year voted 81 to 10 to prevent the FDA move. Court decisions had generally favored the FDA's right to impose restrictions on vitamin preparations, but the Agency recently decided to drop the issue.

THE LATTIMORE-FINK LABORATORIES, INC.

A Damon Associate **P. O. Box 561, Topeka, Kansas 66601**

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The JOURNAL *takes this opportunity to welcome these new members into the Kansas Medical Society.*

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Manuscripts must be typewritten, double spaced, leaving wide margins. Submit the original, plus one copy if possible.

Titles should be short, specific, and amenable to indexing. A subtitle is frequently used to keep the main title short.

Summary: All manuscripts should include a short abstract which is a factual (not descriptive) summary of the work.

Author Responsibility: The author is responsible for all statements made in his work, including changes made by the copy editor. Manuscripts are received with the explicit understanding that they are not simultaneously under consideration by any other publication. Publication elsewhere will be subsequently authorized at the discretion of the Editor.

Galley Proof: To make extensive changes in the article after the text has been set in type may require an additional cost which exceeds the original. The galley proof is for correction of ERRORS, and a rewriting of the article should be done on the original copy BEFORE it is submitted for publication.

Drugs should be called by their generic names; the trade names can be added in parentheses if they are considered important. All *units of measure* must be given in the metric system.

References

Bibliographic references should not exceed 20 in number, documenting key publications. Personal communications and unpublished data should not be included. References should be arranged according to the order of citation, and not alphabetically. All references must be numbered consecutively and all must be cited in the text. Use the style of the AMA publications, giving; name of author, title of article, name of periodical, volume, pages, year.

Illustrations

All material which cannot be set in type, such as photographs, line drawings, graphs, charts, tracings (for preparation of tables, see below) must be mounted on white cardboard. All must be identified on the back as to figure number, author's name, and an arrow indicating top. Legends should be typed double spaced on a separate sheet of paper, limited to a maximum of 30 words.

Drawings and graphs should be done professionally in India ink on illustration board or high grade white drawing paper.

Photographic material should be submitted in duplicate as high-contrast, glossy prints. Color illustrations will be accepted for publication only if the author assumes the cost.

THE JOURNAL will assume the cost of B/W engravings and cuts up to $35 (or 5 cuts). Engraving cost for illustrations in excess of $35 will be billed to the author.

Tables

Because tables are set by hand, their cost is comparable to illustrations. A reasonable number of tables are allowed without cost to the author.

Tables should be self-explanatory and should supplement, not duplicate, the text. Since the purpose of a table is to compare or classify related items, the data must be logically and clearly organized. The relationship and comparison are established by the correct choice of column heads (captions of vertical columns)and stubs (left entries in horizontal listings).

Each table should be typed double spaced, including all headings, on separate sheets of lettersize paper. Oversize paper should not be used. Instead, repeat heads and stubs on a second sheet for tables requiring extra width. Number tables consecutively. Each table must have a title.

Reprints

A reprint order form with a table covering cost will be sent with the galley proof to each contributor. Since the JOURNAL has no way to provide for reprints, they must be ordered by the author and purchased directly from the printer.

LONG HOSPITALIZATION FUTILE IN TREATING ALCOHOLICS

The alcoholic who undergoes long hospital treatment is no more likely to overcome his drinking problem than is the compulsive drinker who stays in the hospital only a week or so to dry out, says a report in *Archives of General Psychiatry,* a publication of the American Medical Association.

A study conducted at the Alcoholic Treatment Center of Mendota State Hospital in Madison, Wis., concluded that "nine days of hospitalization for alcoholic patients may be as good as 82 days. The hospital has a very limited role to play in the treatment of alcoholism."

Physicians know that alcoholics requiring detoxification (drying out) can benefit from hospitalization, the researchers agree. But beyond the initial treatment period, hospital care seems to have little impact on the alcoholic's ability to stay sober and to adjust to his surroundings properly.

The patients in the study were not skid row bums. Over one-third were married and living with an intact family, many had regular jobs and, for almost half, it was their first admission to the Alcoholic Treatment Center.

There were 58 men in the study group. Half were treated for an average period of nine days, and then released, with referral to community supportive services. The others were treated for an average of 30 days, with intensive supportive therapy administered in the hospital.

After 13 months, 11 of the short-stay group and 10 of the long-stay group had stayed dry. And 17 of the short-stay group and 16 of the long-stay patients were again drinking to excess.

Medical-Legal

(Continued from page 115)

patient $500,000 in damages against the driver. The patient appealed the finding in favor of the physician.

On appeal, the Louisiana court examined the evidence on the issue of the physician's negligence. There was testimony by two physicians that the general practitioner's examination of the patient deviated from the standard of ordinary care. Three physicians testified that the treatment conformed to the standard of care, including one orthopedist who said that not moving the patient from the stretcher was the best possible treatment under the conditions. The court concluded that there was ample testimony for the jury to draw either conclusion. The jury's decision was not erroneous.

At the time of trial the patient was paralyzed from the waist down. The court rejected the patient's claim that one-half of a million dollars was an inadequate amount of damages.—*Wiley v. Travelers Insurance Company,* 300 So.2d 555 (La.Ct. of App., Sept. 11, 1974; rehearing denied, Oct. 10, 1974)

Abdominal Aortic Aneurysm

(Continued from page 108)

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2. Dickey, James William, Jr.: Diagnosis. *Amer. J. Surg.* 123:631, 1972.

3. Williams, Roger D.; Fisher, Frederick W. and Dickey, James W., Jr.: Problems in the diagnosis and treatment of abdominal aortic aneurysms. *Amer. J. Surg.* 123:698-701, 1972.

PHILOSOPHY AND MEDICINE

The American Philosophical Association has established a Committee on Philosophy and Medicine, which will develop special programs at meetings of the American Philosophical Association. In addition, the committee will distribute a newsletter including bibliographical and pedagogical information, lists of persons actively interested in philosophy and medicine, announcements of conferences, and other materials. Persons wishing to be on the committee's mailing list should write providing the following information: Name, address, institutional affiliation, professional field, primary interests in philosophy and medicine (e.g., ethical issues in clinical medicine, epistemology of medicine, etc.), and any relevant teaching experience or plans (e.g., undergraduate course in medical ethics, lectures in nursing school, etc.). Enclose $2.00 to cover mailing costs. The committee comprises H. Tristram Engelhardt, Jr. (University of Texas Medical Branch, Galveston), Holly Goldman (Michigan), Samuel Gorovitz (Maryland), John Ladd (Brown), Chairman, David Mayo (Minnesota, Duluth), and William Ruddick (NYU). Write to: Professor John Ladd, Committee on Philosophy and Medicine, Department of Philosophy, Brown University, Providence, Rhode Island 02912.

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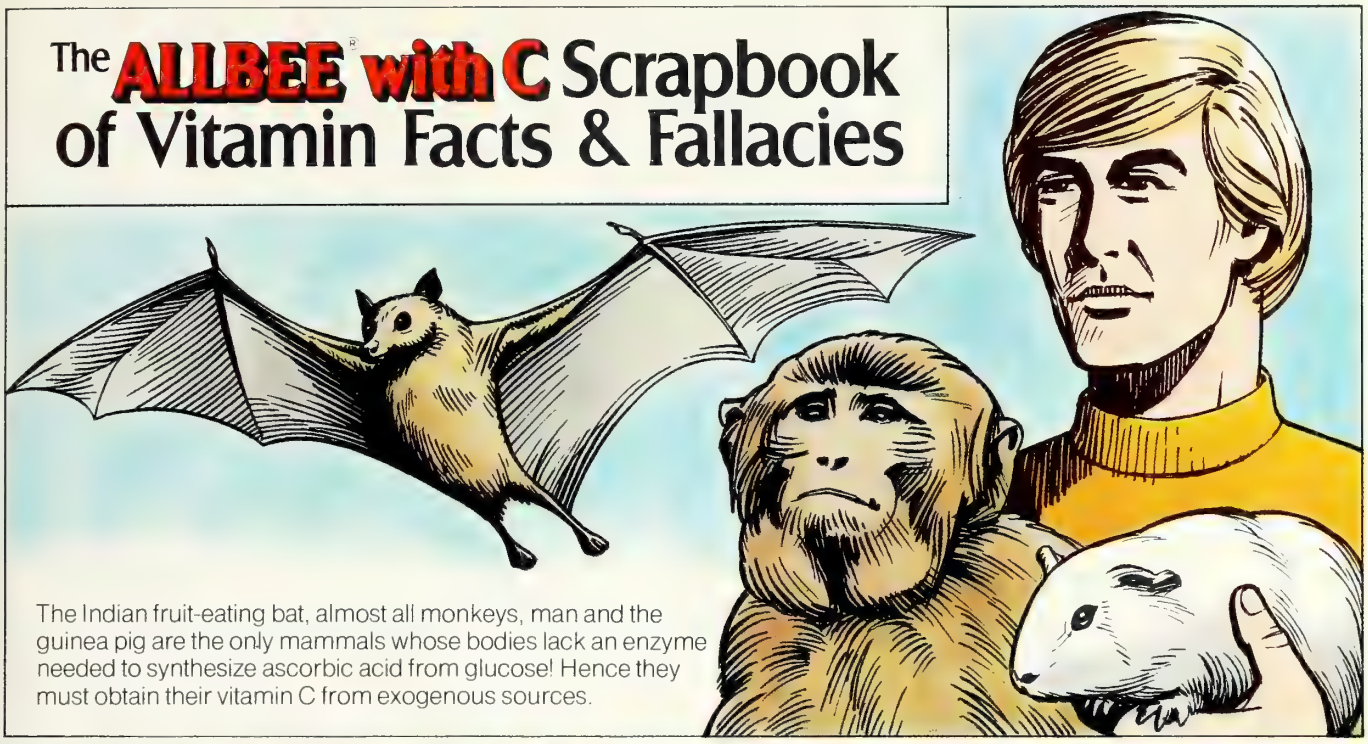
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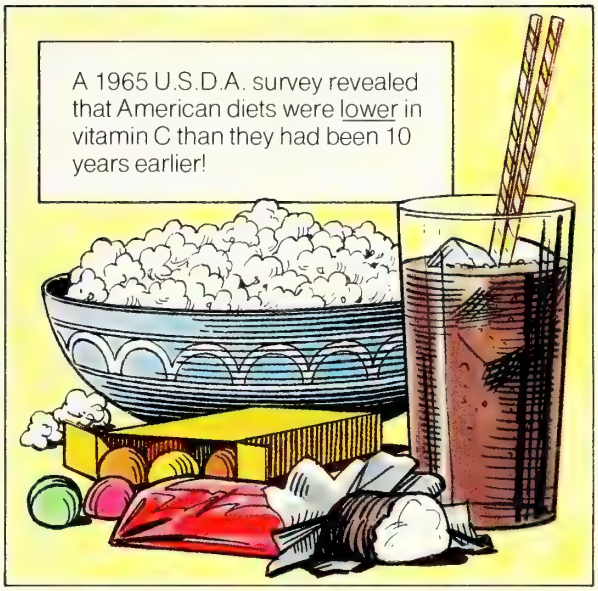


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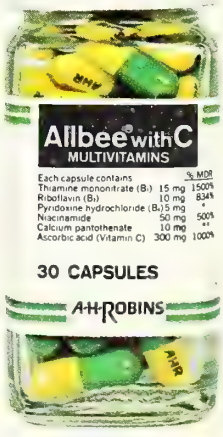


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Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

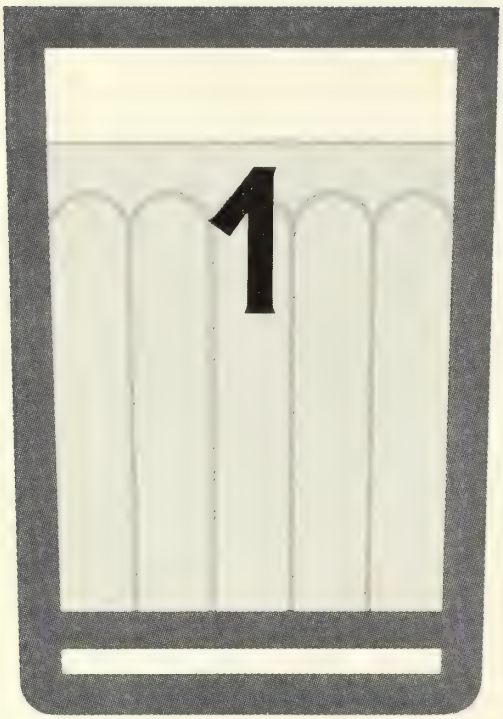
Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

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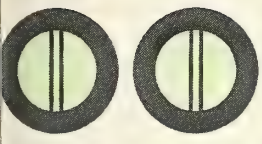




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Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

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Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

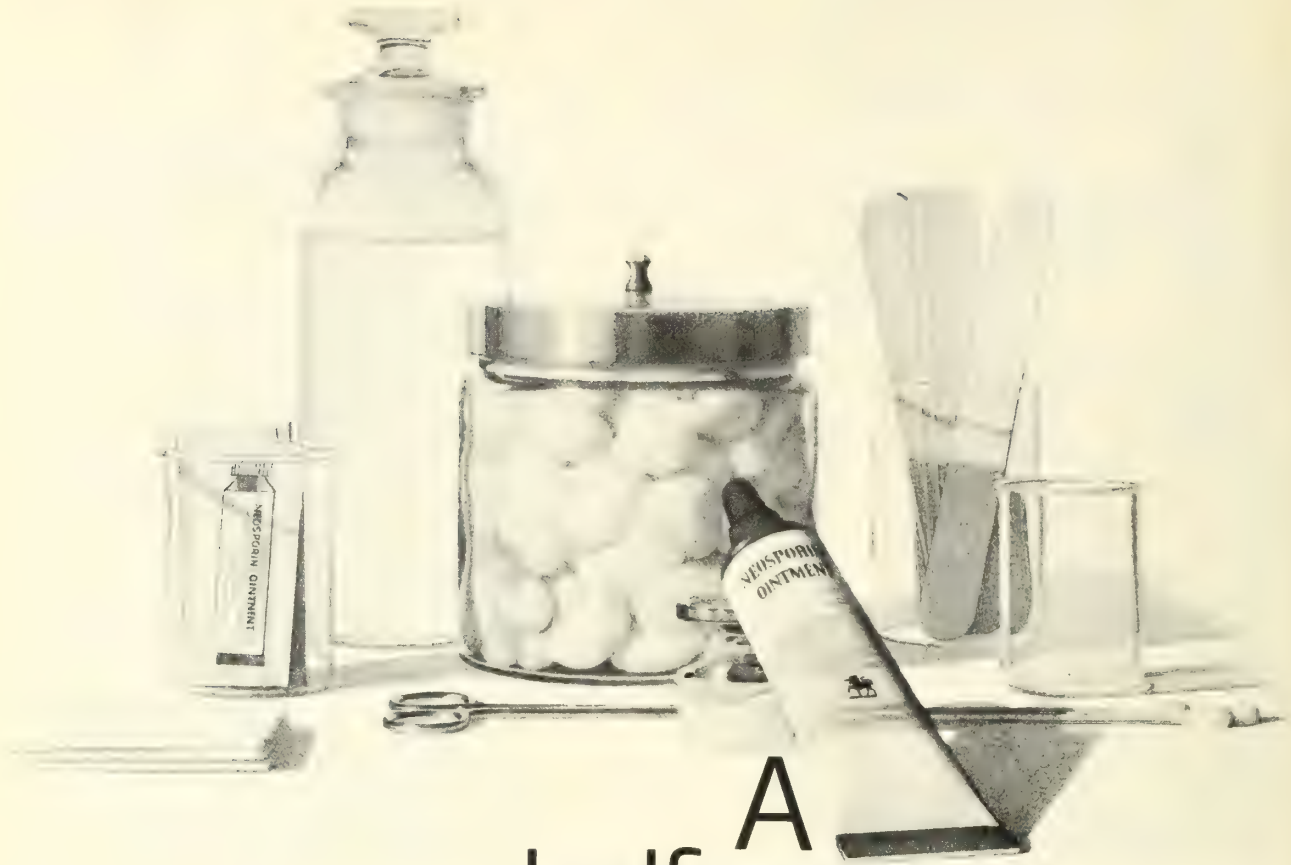
Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

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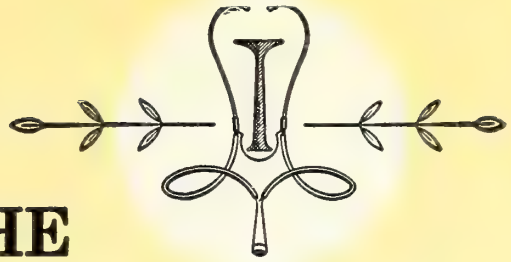
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ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of person allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

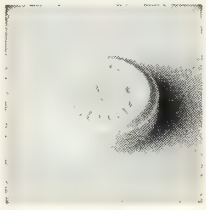
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in freque and/or severity of grand mal seizures require increased dosage of standard convulsant medication; abrupt withdra may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous gestion of alcohol and other CNS depr sants. Withdrawal symptoms (similar those with barbiturates and alcohol) h occurred following abrupt discontinua (convulsions, tremor, abdominal and cle cramps, vomiting and sweating). K addiction-prone individuals under car

respond to one

According to her major
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in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

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with associated
depressive symptoms

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aring age, weigh potential benefit
ainst possible hazard.

ecautions: If combined with other psy-
otropics or anticonvulsants, consider
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rcotics, barbiturates, MAO inhibitors
d other antidepressants may potentiate
action. Usual precautions indicated in
ients severely depressed, or with latent
pression, or with suicidal tendencies.
Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Volume LXXVI, Number 6—June, 1975

The JOURNAL of the KANSAS MEDICAL SOCIETY

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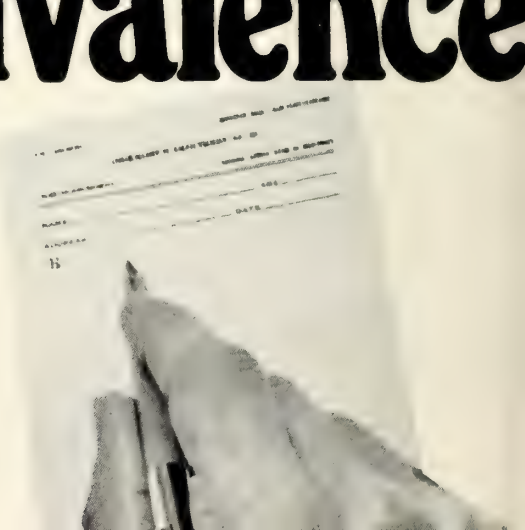
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Bioequivalence



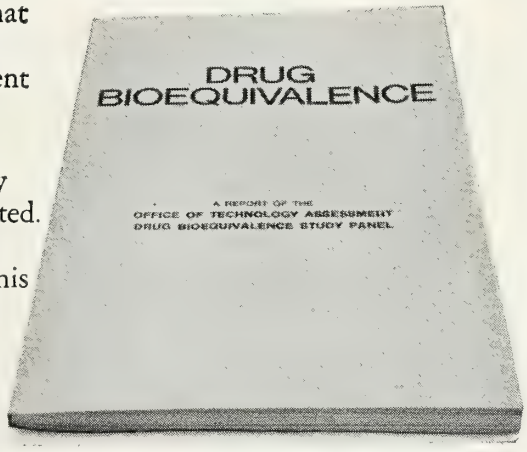
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:
(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A
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*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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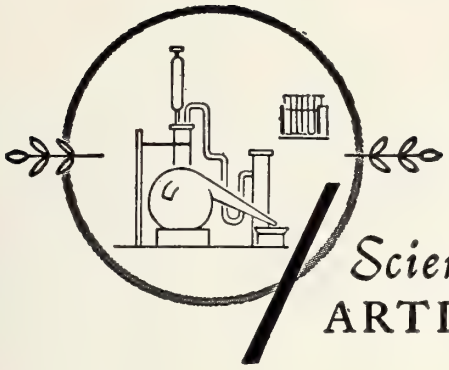
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Reye's Syndrome

Report of Cases and a Review of Literature

R. E. SIMMONS, M.D. C.T. CHO, M.D., Ph.D. ***and***
J. K. REDDY, M.D., ***Kansas City, Kansas***

REYE'S SYNDROME (also called encephalopathy and fatty degeneration of viscera in children) is now a well-defined clinicopathologic entity.[1–3] The cause and pathogenesis of the syndrome are still largely unknown. The clinical course of Reye's syndrome in majority of reported cases includes a history of preceding respiratory illness, followed by protracted vomiting, change in level of consciousness which may progress rapidly to coma, and often leading to apnea and death. The syndrome, however, has a spectrum of severity ranging from spontaneously resolving mild cases to severe cases which result in death within 24 hours after the onset of encephalopathy.

The purpose of this paper is to report nine cases of Reye's syndrome which were admitted to the University of Kansas Medical Center, Kansas City, Kansas and the Children's Mercy Hospital, Kansas City, Missouri, between 1969 and 1973. In addition, the pertinent literature is reviewed and the distinctive features of this clinical syndrome are discussed.

Case Report

Nine cases of Reye's syndrome reported here were children under the age of 14, and all had characteristic clinical, pathological, and laboratory features of the syndrome *(Tables I-III)*. Because of variations in spectrum of the illness, only Case 2 and 5 are described in detail, to illustrate the mild and severe forms of Reye's syndrome.

Case 2

This 10-year-old white girl was well until four days prior to admission, when she developed low grade fever, vomiting, arthralgia, and headache. The day prior to admission, she vomited frequently and became confused and agitated. There was no history of toxic ingestion or head trauma. The child had recently been exposed to a flu-like illness at the school. On admission, she appeared well-nourished and well-developed. She was comatose with intermittent decerebrate posturing. She was responsive only to painful stimuli by movements of extremities. Her pupils were dilated and reacted sluggishly to light. Bilateral sustained ankle clonus and pathological reflexes (Babinski, Hoffman) were elicited.

Routine blood cell counts, urinalysis, blood urea nitrogen, and serum electrolytes were all within normal limits. Serum total bilirubin was 2.7 mg/100 ml with a direct fraction of 1.6 mg/100 ml. Serum glutamine transaminase was 400 units/ml. Prothrombin time was 20.5 seconds with a control of 9.8 seconds. Cerebral spinal fluid (CSF) showed a normal pressure and contained 14,000 RBC/cu mm (traumatic tap); 3 WBC/cu mm; protein, 46 gm/100 ml; and glucose, 127 mg/100 ml. A simultaneous blood sugar reading was 192 mg/100 ml (after initiation of intravenous fluid con-

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TABLE I

CLINICAL DATA OF PATIENTS WITH REYE'S SYNDROME

Case No.	*Age (Years)*	*Sex*	*Prodromal Illness*	*Duration of Prodromal Illness (Days)*	*Grade of Encephalopathy** FIRST SEEN BY PRIVATE DOCTOR	ADMISSION	48 HRS. AFTER ADM.	*Outcome*
1	8 mos	M	URI	3		3	5	Died
2	10	F	Flu-like	4	3	4	5	Died
3	3	F	URI	4	3	4	5	Died
4	14	M	Flu-like	3		4	5	Died
5	9	M	Flu-like	7	2	3	0	Survived
6	4	M	Rheumatoid arthritis	30	3	4	3	Died
7	12	M	Flu-like	6	3	4	5	Died
8	5	M	Chickenpox	7		3	5	Died
9	5	M	Chickenpox	4	3	4	5	Died

URI = Upper respiratory infection.

* Grading of encephalopathy: Grade 1 (mildly lethargic), Grade 2 (deep lethargy, confusion), Grade 3 (agitation, light coma), Grade 4 (deep coma, seizures), and Grade 5 (deep coma, seizures, decerebate posturing, fixed dilated pupils), Grade 0 (normal).

Cases 1-7 (from the University of Kansas Medical Center), Cases 8 and 9 (from the Children's Mercy Hospital, provided by Dr. H. A. Wenner).

taining glucose). Smears and cultures of CSF were negative for bacteria, fungi, and viruses. Urine screen for drugs was negative.

The patient's condition showed a progressive deterioration, and within 24 hours after admission she was in a grade 5 encephalopathy *(Table I)*. She developed respiratory arrest and required artificial respiration. Subsequent hospital course was complicated by development of cardiovascular collapse, congestive heart failure, and clinical features of diabetes insipidus. Vigorous life-supportive therapy was given. The child did not regain spontaneous respiration, her EEG became isoelectric, and she was pronounced dead on the eighth hospital day.

Autopsy findings included marked brain edema, nonspecific anoxic changes of the neurons, isolated swollen astrocytes, and some perivascular hemorrhage. There was no evidence of encephalitis or meningitis. The liver was markedly enlarged, yellow, and greasy. There was diffuse fine lipid droplet accumulation in the hepatocytes with scattered small foci of inflammation and isolated hepatocellular necrosis. Focal hemorrhages occurred in the subendocardium, lung, gastrointestinal tract, and urinary bladder. Generalized reactive lymphadenopathy was seen. Focal areas of acute and organizing pneumonia were also noted. Various organs and tissues were submitted for bacterial and viral studies.

TABLE II

DIAGNOSIS OF REYE'S SYNDROME

Findings	*Our Cases*
1. Preceding viral-like illness	8/9
2. Protracted vomiting	7/9
3. Rapid development of agitation and stupor	9/9
4. Absence of focal neurological signs	9/9
5. Abnormal lab tests	
Elevated transaminases	8/8
Prolonged protime	8/9
6. Minimal or absent jaundice	8/8
Bilirubin normal or slightly elevated	8/8
7. Normal CSF	9/9
8. Fatty infiltration of liver	9/9
9. Inconstant findings	
Hepatomegaly	8/9
Irregular respiration	9/9
Resp. alkalosis/met. acidosis	9/9
Low blood sugar	5/9
Low CSF sugar	3/9
High blood NH_3	4/7

TABLE III

PATHOLOGICAL FINDINGS IN PATIENTS WITH REYE'S SYNDROME

Features	*Autopsy*	*Biopsy*
1. Cerebral edema, no encephalitis or meningitis	7/7	—
2. Fine lipid droplet accumulation in liver, focal inflammation, necrosis	7/7	2/2
3. Heart, kidney (as 2)	3/7	—

Only parainfluenza 2 virus was isolated from the brain and liver.

Case 5

This 9-year-old Negro male suffered a flu-like illness of one week's duration in March 1973, with runny nose, sore throat, low grade fever, headache, stomachache, vomiting, and somnolence. These symptoms improved somewhat, but on the day of admission the child became confused, irritable, and difficult to arouse. The child was seen at a local hospital, the physician recognized this as a possible case of Reye's syndrome, and transferred the child immediately to the University of Kansas Medical Center. History was negative for trauma, toxic ingestion, or medication except aspirin, which he received during the course of his illness. Several family members had had colds during the week of the patient's illness.

On admission, the child appeared well-nourished and well-developed. He was deeply lethargic with alternating delirium and coma. Intermittent episodes of hyperpnea were noted. The pupils were equal and responded normally to light. The muscle tone was somewhat increased; pathological reflexes were not elicited. The liver extended 2 cm below the right costal margin and was somewhat firm in consistency. Routine blood cell counts, uninalysis, blood urea nitrogen, and electrolytes were all within normal limits. Blood sugar was 124 mg/100 ml. Total serum bilirubin was 3.3 mg/100 ml with a direct fraction of 2.2 mg/100 ml. SGOT was 2960 units/ml, and SGPT was 2320 units/ml. Prothrombin time was 16.7 seconds with a control of 11.2 seconds. Lumbar puncture revealed a clear fluid with normal pressure; it contained 122 RBC/cu mm and 1 WBC/cu mm; protein was 33 mg/100 ml, and glucose was 76 mg/100 ml. Smears and cultures of the CSF were negative for bacterial, fungal, and viral pathogens. Serum salicylate level was 15 mg/100 ml.

The patient continued in a fluctuating encephalopathy *(Table I)*, however, periods of coma were brief. He received supportive intravenous fluid therapy. Within 12 hours after admission, he was alert and showed no abnormal neurological signs. On the second hospital day he began taking a regular diet. His sclerae were noted to be slightly icteric, his total bilirubin was 5.1 mg/100 ml with a direct bilirubin of 3.8 mg/100 ml. At this time blood ammonia was normal. A percutaneous liver biopsy was performed on the fifth hospital day and showed findings compatible with Reye's syndrome *(Figures 1 and 2)*. The patient's serum transaminase returned to normal and he was discharged on the ninth hospital day with no evidence of residual changes.

Comments

History

Encephalopathy and fatty degeneration of viscera in children was defined as a clinicopathologic entity by Reye *et al.*, in 1963.[1] Review of literature showed that similar diseases have been described previously, *i.e.*, Jamaican vomiting sickness,[4] fatal spontaneous hypoglycemia,[5] and unknown encephalitis or meningitis.[6] Since 1963, nearly 100 articles have reported almost 1,000 cases over the world. Information regarding this syndrome is rapidly accumulating, and it is likely that the etiology and pathogenesis may become clearer in the near future.

Clinical Features

The age of the reported cases is newborn to 16 years. Half of the victims were under 6 years of age, both age extremes being uncommon. Boys and girls were equally affected. Reye's syndrome has occasionally occurred in siblings.[3, 7]

Most of the affected children have previously been in good health. The prodromal symptoms, usually those

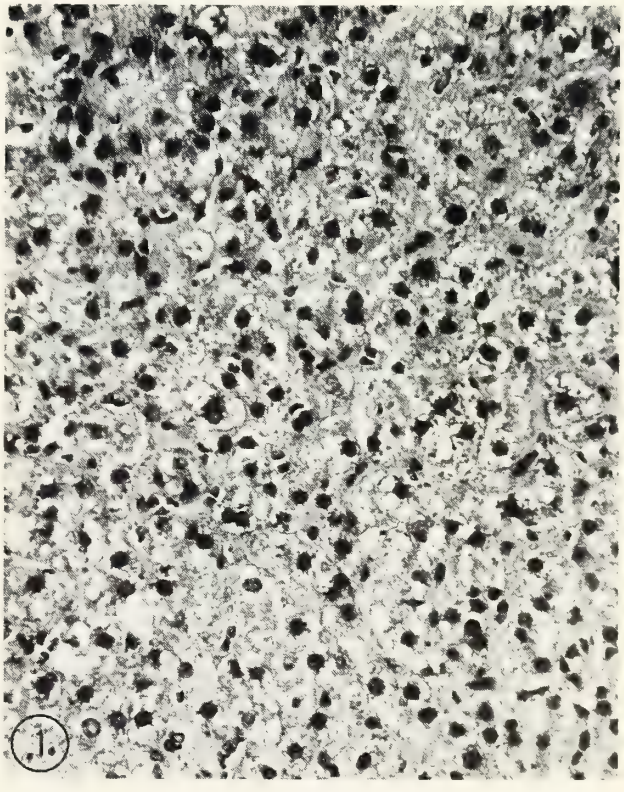


Figure 1. Microscopic Changes in the Liver (Case 5). Hematoxylin-eosin staining of the liver biopsy specimen showed foamy appearing vacuolated hepatocytes, periportal foci of monocytic infiltration, scattered necrotic cells and mitotic figures. (×180)

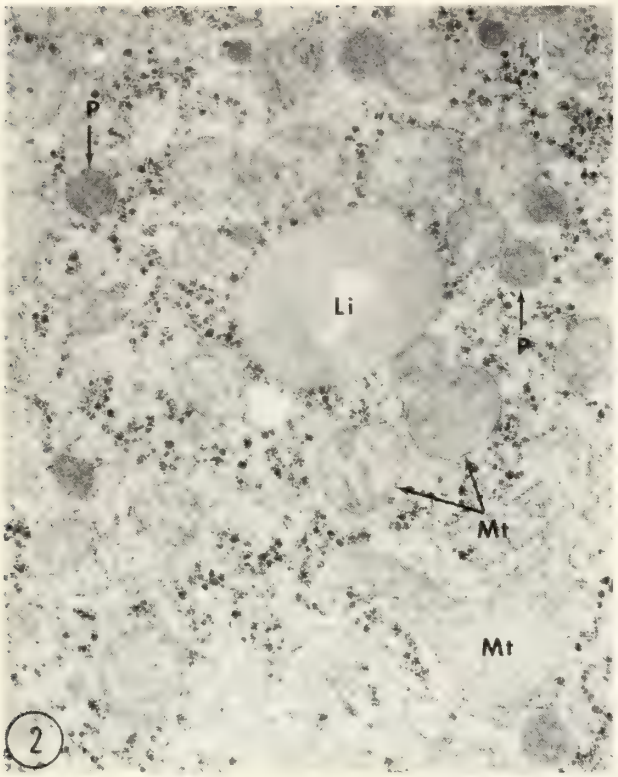


Figure 2. Electron micrograph of portion of liver cell during recovery phase (Case 5). Few lipid vacuoles (Li) are still seen in the cytoplasm. Majority of the mitochondria (mt arrows) appear normal in size, suggesting recovery. An occasional large, irregular mitochondrion (mt) is encountered during recovery phase. The peroxisomes (P) are increased in number. (×22,000)

of upper respiratory infection or flu-like illness which may be present for a week's duration, are followed by protracted vomiting, and abrupt delirium leading to stupor or coma. Convulsions, irregular respiration, or apnea are common. Occasionally, the patient may simply become unconscious without the prodromal illness. There are usually no focal neurological signs. Muscle tone and the deep tendon reflexes are variable, and decerebrate or decorticate posturing is common. Pupillary changes may be present, but fundi are normal. Jaundice is absent or very slight. The liver may be enlarged or abnormally firm.

All of our patients except one (Case 6) had a history of an upper respiratory or flu-like illness within a week before the onset of encephalopathy. Some felt improvement of their illness before the onset of persistent vomiting. Complaints of severe headache, abdominal pains, and somnolence in absence of high fever frequently accompanied the onset of encephalopathy. All of our patients were admitted in grade 3 or 4 encephalopathy using the grading system by Schubert *et al.*[3] Most of our patients progressed to grade 5 encephalopathy within 24 hours of admission and never regained consciousness. One patient (Case 5) spontaneously recovered from the grade 3 encephalopathy within 12 hours after transfer to our hospital; followup studies of this patient showed no residual changes. Another patient (case 6) progressed to grade 4 encephalopathy, and received exchange transfusion. He improved from the encephalopathy but subsequently died of the complication of pseudomonas pneumonia. This case presented an unusual feature in that he had no preceding viral illness and did not develop vomiting. He had symptoms of juvenile rheumatoid arthritis and had been treated with salicylate for a month prior to the development of encephalopathy. He had typical laboratory and pathological features of Reye's syndrome. Similar cases have been reported previously as Reye's syndrome.[3]

Laboratory Findings

It has been emphasized that biochemical findings in patients with Reye's syndrome vary considerably.[8] The most consistent findings include normal cerebrospinal fluid cell count and protein, elevated SGOT and SGPT, normal or slightly elevated bilirubin, and prolonged protime. Most patients had findings of respiratory alkalosis and compensatory metabolic acidosis. Variable findings include low blood glucose, low CSF glucose, elevated blood ammonia, and hyperkalemia. Some workers have found a short chain fatty acidemia,[9] and a selective amino acidemia.[10] The laboratory findings in our patients agree with those described by Huttenlocher[2] as criteria for Reye's syndrome *(Table II)*.

Pathological Findings

There are no pathognomonic changes in the brain in patients who die of Reye's syndrome. Most cases have cerebral edema with no evidence of encephalitis or meningitis. Anoxic-type neuronal changes and swollen astrocytes are frequently observed. It is the associated fatty degeneration of the viscera which distinguishes this syndrome from other types of encephalopathy. All autopsy cases had a large, yellow, greasy liver. The liver is usually firm in consistency. Microscopically it shows diffuse fine cytoplasmic vacuolization of hepatocytes on hematoxylin-eosin staining. By fat staining the hepatic parenchymal cells are heavily infiltrated with fine lipid droplets consisting principally of triglycerides. Small foci of periportal mononuclear cell infiltration and isolated hepatocellular necrosis are frequently seen. Similar fatty accumulation may be seen in the renal tubules of the kidney and in the myocardial and skeletal muscle cells.[1] Ultrastructural changes which accompany a severe grade of encephalopathy include: de-

crease or absence of glycogen particles, proliferation of endoplasmic reticulum with abnormal clumping of ribosomes, swollen mitochondria with ameboid configurations and loss of mitochondrial dense granules, increased number of peroxisomes, increased number of lipid droplets, and swollen spherical nuclei and narrowing of the space of Disse secondary to swelling of the hepatocytes. Most of these changes developed rapidly and were reversible. Schubert *et al.* found these reversible changes in the liver are in good correlation with clinical course of the disease.[3]

Other variable pathologic findings are non-specific, *e.g.,* pulmonary congestion, focal interstitial pneumonia, focal bronchopneumonia, congestion of the liver, spleen, adrenals, kidneys, pancreas, gastrointestinal mucosal hemorrhages, generalized serosal petechial hemorrhages, and reactive lymphadenopathy. The pathological findings of our fatal cases are consistent with those described for Reye's syndrome *(Table III).*

Etiology and Epidemiology

The etiology of Reye's syndrome in most areas of the world remains a mystery. In Jamaica, a vegetable toxin (hypoglycin) is generally accepted as an important etiologic factor.[11] In northern Thailand, aflatoxin B_1, an aspergillus mold contaminant of food, has been implicated as the cause of "Udorn encephalopathy" which is considered to be the same clinicopathological entity.[12]

In North America, Great Britain, Europe, South Africa, Australia, and New Zealand various viral diseases have been linked to the syndrome. Most have been non-specific upper respiratory infections or flu-like illness, but some cases have been associated with chickenpox.[13] Recently, attention has been given to outbreaks of Reye's syndrome following epidemics of influenza B.[14] In addition, adenoviruses, Coxsackie viruses, echoviruses, influenza A, reovirus, herpes simplex, a polio-like virus, and parainfluenza have been isolated sporadically.[3, 15–17] Among the nine patients we have studied, two (Cases 8 and 9) had chickenpox, one (Case 4) had influenza A_2 (Hong Kong), and one (Case 2) had parinfluenza virus type 2. The latter virus was isolated from the brain and liver tissues of the patient who died of the disease. Virus studies on the remaining five patients were all negative. Many toxic agents have been suggested as possible causes of Reye's syndrome, *e.g.,* paint thinner, pteridine, isopropyl alcohol, phosphorus, and halogenated hydrocarbons.[18] Salicylates have repeatedly been suggested as playing a role in the etiology of Reye's syndrome.[19] A Reye's syndrome-like illness has been reported in few cases of juvenile rheumatoid arthritis on high doses of salicylates.[1]

Pathogenesis

The pathogenesis of Reye's syndrome is unknown, although it is thought to represent a common pathway for a variety of toxic etiologies.[14] Limitation of pathologic involvement to the metabolically most active tissues and the metabolic-type encephalopathy characterizing this peculiar syndrome argue in favor of an acute metabolic crisis as the mechanism. The ultrastructural changes observed in this syndrome suggest that the basic lesion is the uncoupling of oxidative phosphorylation by an exogenous or endogenous toxin through any number of mechanisms.[3, 11] This would result in hypoglycemia, fatty acid mobilization with intracellular accumulation of lipids, further deranged metabolism and enzyme inhibition resulting in failure to detoxification and possibly the release of abnormal metabolites, which might themselves act as toxins. Thus, the uncoupling of the mitochondria could result in a cascade-type production of potential toxins, and this process might become irreversible.

Death in Reye's syndrome is attributable to progressive metabolic encephalopathy which terminates in brain stem depression and apnea. The pathogenesis of metabolic encephalopathy in Reye's syndrome may be directly related to an exogenous or endogenous toxin or combination of toxins, or related to abnormal host reaction to certain infections. The importance of ammonia, short chain fatty acids, amino acids, and other substances concerning the production of encephalopathy is speculative. Hypoglycemia and anoxia are basic mechanisms of metabolic encephalopathy, and these undoubtedly play a role in the encephalopathy of Reye's syndrome in some cases. Cerebral edema may result in brain stem compression, tonsillar herniation, and death.

Occasionally, cardiac arrest occurs before cerebral edema has progressed to the point of brain stem compression. Hyperkalemia has been suggested as the cause of EKG changes and arrhythmias in Reye's syndrome. Development of congestive heart failure in some patients suggests myocardial or conduction fiber pathology.

Differential Diagnosis

The findings of encephalopathy without evidence of CNS inflammation, elevated transaminase with normal bilirubin, fatty accumulation of the liver with only isolated inflammation or necrosis, and having no other reasonable explanation for these findings should suggest the diagnosis of Reye's syndrome.

The encephalopathy of Reye's syndrome can be differentiated from the CNS manifestations of the various meningitides or encephalitides on the basis of: (1) absence of focal neurological signs, nuchal rigidity, or meningisums; and (2) clear CSF with normal protein content.

Reye's syndrome has clinical and laboratory findings which may be confused with hepatitis or fulminant liver necrosis. The absence of jaundice with a normal or only slightly elevated bilirubin, and liver biopsy showing diffuse fine lipid droplet accumulation in the absence of diffuse hepatocytic necrosis or inflammation should enable one to differentiate these entities.

Salicylism may present with hyperventilation, profound changes in the sensorium, elevated transaminase, and fatty liver. Differential diagnosis can be made on the basis of a selective aminoacidemia, as described by Hilty.[10]

Treatment

Initial observation indicated that there is no proof that any form of treatment helps.[1] Various means of therapy have been suggested. Rational treatment has included intravenous glucose and insulin to correct the hypoglycemia and hyperkalemia, but this treatment seldom alters the progression of encephalopathy.[1] Since Reye's syndrome in some respects resembles hepatic failure, regimens of the treatment of hepatic failure have been tried. Gut sterilization to prevent high blood ammonia has not altered the course of encephalopathy. Fresh frozen plasma and vitamin K have been administered in an attempt to replace the coagulation factors produced by the liver. Mannitol and steroids have been used to reduce brain swelling, but again, there is no evidence that this has helped. Supportive therapy has included anticonvulsants, various cardiotonic agents, vasopressin, digitoxin, and the extensive use of respirator.

Peritoneal dialysis has had limited use and with equivocal results. Therefore, it cannot be fairly evaluated, although the rationale of filtering a possible dialysable toxin is tempting. Whole blood exchange transfusion has frequently been associated with a favorable outcome. The rationale is to correct the bleeding disorder, permitting a diagnostic liver biopsy, and to remove possible plasma toxins. Schubert *et al.*[3] suggest that the indication for exchange transfusion should be grade 3 and 4 encephalopathy *(Table I)*, and emphasize that children with grade 1 and 2 must be frequently evaluated for signs of rapid progression to more severe grades. Prolonged grades 5 may not be an indication for exchange transfusion as it is nearly always associated with a fatal outcome or permanent severe brain damage. Total blood washout (Klebanoff procedure) has been used recently for treatment of limited cases of Reye's syndrome and was reported to have favorable results.[20]

Treatment in our nine cases included intravenous glucose in all cases, and variable use of insulin, steroids, gut sterilization, vitamin K, plasmante, albumin, whole blood, anticonvulsants, epinephrine, vasopressin, digitoxin, and exchange transfusion. Eight cases required the use of a mechanical respirator within 24 hours after admission.

Summary

Reye's syndrome is a distinct clinicopathologic entity of unknown etiology. The syndrome affects primarily children. It has a wide spectrum of clinical severity, the mortality rate varies greatly in different series. Many types of therapy have been attempted, and the results of therapy have been variable. Intensive studies are needed to define the etiology and therapy for this perplexing disease.

Addendum

After this paper was written, a nationwide epidemic of influenza B occurred between December 1973 and March 1974. During this period, 286 cases of Reye's syndrome were reported to Center for Disease Control (Morbidity and Mortality Weekly Report, March 23, 1974). The nationwide fatality rate of Reye's syndrome for this epidemic was 36 per cent. During that time, 12 cases of Reye's syndrome were admitted to the University of Kansas Medical Center, 4 of these died of the disease.

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Digital Ischemia

Hypothenar Hammer Syndrome

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SYMPTOMATIC ISCHEMIA of the hand and fingers, although less frequent than in the lower extremity, is not uncommon and presents a diagnostic challenge to the vascular surgeon. Hypothenar hammer syndrome is one of the disease states which must be considered in evaluating the ischemic hand. This syndrome was first reported by Sophus von Rosen,[1] in 1934, and typically results from trauma to the ulnar artery as it crosses the hamate bone in the hypothenar eminence of the hand.

This paper describes a case of symptomatic ischemia of the hand caused by the hypothenar hammer syndrome. It discusses this syndrome and the evaluation of patients with ischemia of the hands and fingers.

The problem of ischemia of the upper extremity is discussed. Evaluation and general principles of treatment are reviewed. An illustrative case of digital ischemia caused by the hypothenar hammer syndrome is reported. The hypothenar hammer syndrome is discussed in detail considering its pathogenesis, evaluation and both operative and non-operative therapy.

Case Report

A 41-year-old white male service station owner was admitted to St. Luke's Hospital of Kansas City, with complaints of pain and coldness affecting the right third and fourth digit for a period of eight months prior to admission. The pain was typically precipitated by cold, with associated blanching of the skin of the involved digits, followed by a purplish discoloration, and finally a deep hyperemia as rewarming occurred. These vasospastic changes did not affect the other digits of his hands and feet. In his occupation, he had often used the palm of his hand in a hammer fashion to replace hubcaps and other parts in car repairs. He had a history of smoking and mild hypertension.

Examination of the right-upper extremity revealed coolness of the skin of the third and fourth digits, with no color change and no thinning or ulceration of the skin. The ulnar pulse was absent in the right wrist, and the Allen test was positive confirming occlusion of the ulnar artery. Vasospasm was precipitated in the third and fourth digits when the hand was submerged in cold water *(Figure 1)*. The changes were more severe in the fourth digit. The physical examination was otherwise unremarkable, including the arterial system in the right arm and shoulder area.

A clinical and laboratory search for an underlying disease state which might be associated with Raynaud's phenomenon was unrevealing. Chest x-ray was normal with no cervical rib. Arteriography was used to evaluate the vasculature of the right arm and hand, using 20



Figure 1. Vasospastic reaction to submersion of right hand in cold water is manifest by pallor which is limited to the fourth digit.

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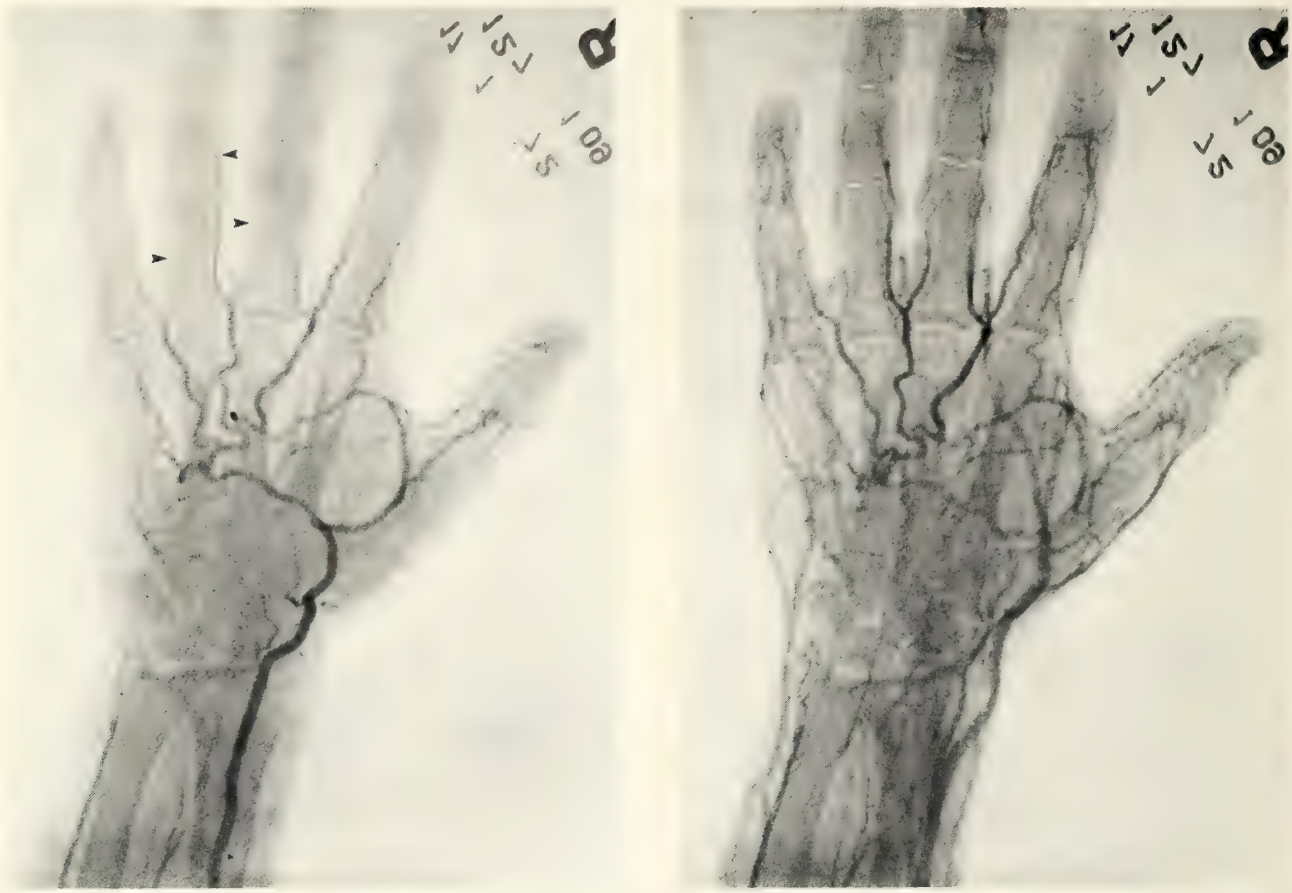


Figure 2. Occlusion of the ulnar artery and digital arteries to the third and fourth fingers (arrows) in both the early (a) and late (b) phases of the arteriogram. Subtraction of the original arteriograms has been employed to obtain better vascular detail. The location of digital artery occlusion corresponds with the clinical pattern of vasospasm and pain.

mg of tolazoline to obtain maximum vasodilation of digital vessels. The arterial tree was normal down to the wrist. The ulnar artery was occluded at the wrist with segmental occlusions in the digital arteries to the third and fourth digits *(Figure 2)*. There was normal filling of the digital arteries of the fifth digit. The obstructive lesions of the digital arteries correspond to the distribution of the vasospastic findings. Right stellate ganglion block resulted in reversal of the vasospastic changes and transient clinical improvement.

Initial therapy consisted of cessation of smoking, protection from cold exposure, careful avoidance of hand injury, and reserpine taken orally. The patient was followed on this regimen for ten months, during which time his symptoms worsened. Surgical therapy was then recommended, and transthoracic dorsal sympathectomy through the axillary approach was performed with removal of the lower half of the stellate ganglion and the sympathetic chain through and including the fourth thoracic sympathetic ganglion.

The patient has had an excellent response for the 22 months since sympathectomy. Examination with the Doppler ultrasonic flowmeter demonstrates persistence of the ulnar artery and digital artery obstructions, but the skin of his right hand and finger remains warm and dry. The patient has had prolonged unavoidable exposure to subfreezing temperatures with total relief of the preoperative symptomatic vasospastic problem.

Discussion

A survey of employees in motor vehicle maintenance workshops in Australia by Little and Ferguson[2] detected a 14 per cent incidence of hypothenar hammer syndrome in a group of 79 men who habitually used their hands as a hammer. This study suggests that this lesion occurs more frequently than is recognized, and that it should be possible to prevent its occurrence with better industrial education. The clinical presentation of this syndrome is typically a vasospastic phenomenon involving the fourth and possibly the third digit. This localized Raynaud's phenomenon is usually precipitated by cold exposure and associated with pain. There may be an associated aneurysm of the traumatized ulnar artery, presenting as a tender mass in the hypo-

thenar eminence. In an occasional case, the ulnar artery aneurysm may exist without Raynaud's phenomenon.[3]

The pathogenesis of this syndrome is related to trauma to the ulnar artery in the palm of the hand at the point at which it crosses the hook of the hamate bone *(Figure 3)*. This syndrome has occurred after a single episode of severe trauma to this artery but typically results from repetitive trauma usually of an occupation origin. The trauma may initially result in spasm of the ulnar artery and its digital branches, and more extensive injury will cause thrombosis. Repetitive trauma to a thrombosed ulnar artery may dislodge small emboli to the digital arteries of the involved digits and produce the arteriographic changes seen in *Figure 2*. Degeneration of the wall of the artery may result in aneurysm formation manifesting itself as a tender mass in the hypothenar eminence. The potential for embolization to the digital arteries and the threat of rupture exist when an aneurysm develops. The fifth digital artery often takes its origin from the ulnar artery proximal to the hamate bone, as emphasized by Conn.[4] This anatomical fact explains the lack of involvement of the fifth digit in the vasospastic phenomenon seen in the fourth digit *(Figure 3)*.

This syndrome should be suspected when unilateral vasospastic changes involve the fourth digit in a patient with a history of trauma to the palmar surface of the hand. Absence of the ulnar pulse, evaluation of palmar and digital vasculature with the Doppler ultrasonic flow detector, and a positive Allen test all serve to confirm the diagnosis. Such a patient should, however, be thoroughly evaluated to consider other causes of symptomatic ischemia of the hand and fingers before this diagnosis can be confirmed.

Ischemia of the hand and fingers may occur as a result of reduction of arterial blood flow caused by a proximal obstructive lesion, or as a result of severe spasm of the distal arterial tree in response to stimuli such as cold and tobacco. Vasospasm may occur as an isolated problem, or as a manifestation of an underlying disease state. It may also be caused by distal embolization of small thrombi from proximal arterial lesions. These relationships require a thorough, complete evaluation to define the etiology of the ischemic changes in an individual patient.

Raynaud's disease, Raynaud's phenomenon, and Buerger's disease or thromboangiitis obliterans are the three most-common vasospastic syndromes which are encountered. Acrocyanosis is less common and differs in that the abnormal digits are cyanotic in color and unrelated to temperature changes. Raynaud's disease is a diagnosis of exclusion after all underlying diseases have been evaluated. Raynaud's phenomenon is the diagnosis applied when the vasospastic changes occur in association with another disease state such as scleroderma, lupus erythematosus, rheumatoid arthritis, dermatomyositis, periarteritis nodosa, myeloma, leukemia, hemoglobinopathies, or heavy metal intoxication.[5]

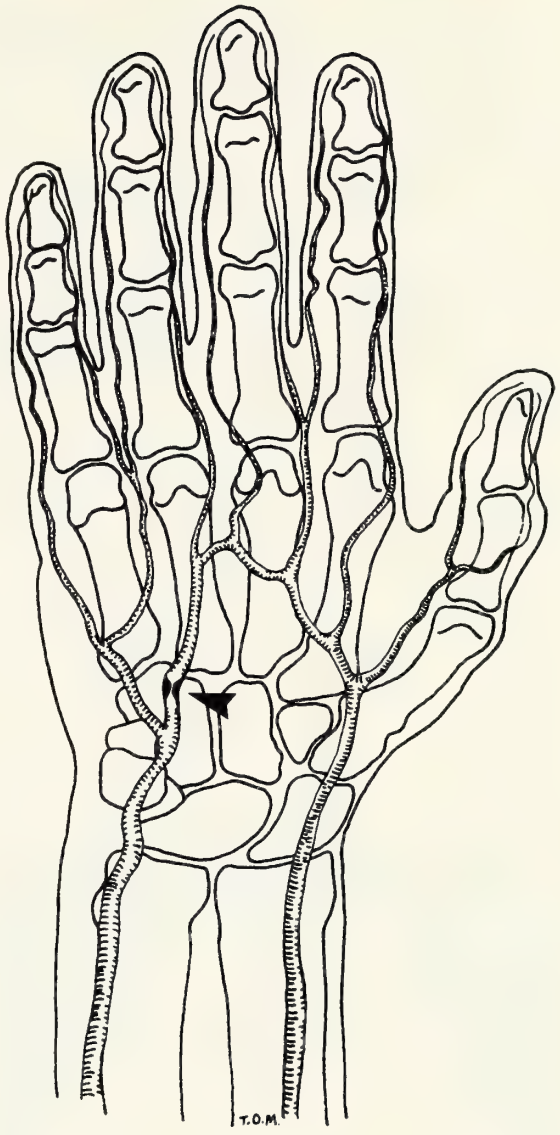


Figure 3. The arrow indicates the point at which the ulnar artery crosses the hook of the hamate bone.

Clinical evaluation includes history and physical examination to search for evidence of systemic disease and evaluate the arterial tree of the upper extremity. The Allen test and vascular response to cold exposure may be helpful. Evaluation of the arterial tree with the Doppler ultrasonic flow detector is a safe, non-invasive, and informative technique.

Arteriography of the upper extremity will be necessary in many patients. An arteriogram is necessary to adequately evaluate proximal arterial lesions which

may include obstructive or ulcerated plaque, aneurysm, or subclavian steal. Intraarterial tolazoline is useful to overcome the arteriospasm which may occur with arterial puncture and allows better detailed study of the digital vessels.

Treatment of upper extremity ischemia is related to the specific cause. Obstructive arterial lesions may require reconstruction with endarterectomy or grafting procedure. Aneurysmal lesions often require resection and grafting. Extrinsic compression of the artery may require surgical relief of the compression with resection of the first rib and, in many cases, reconstruction of the involved segment of artery.

Patients with ischemia on a vasospastic basis will require therapy for the underlying disease state and specific measures to control the vasospastic problem. These measures include complete cessation of tobacco, careful avoidance to cold exposure and injury to the hand. Vasodilators and reserpine have been used by many in the management of this problem. Patients who have progressive or disabling symptoms or tissue loss with digital ulceration should be strongly considered for dorsal sympathectomy.[7]

The specific problem of hypothenar hammer syndrome requires the full outline of steps for evaluation, and presents both obstructive and vasospastic components in its pathology. The majority of patients with this syndrome will require therapy for vasospastic symptoms, but a few patients with aneurysm of the ulnar artery will require resection and possibly reconstruction. Vasospastic symptoms will be controlled with nonoperative measures in many patients, but those with progressive or disabling symptoms will require dorsal sympathectomy.[4, 5]

Summary

The problem of symptomatic ischemia of the upper extremity has been illustrated with case report of a patient with hypothenar hammer syndrome. The cause, evaluation, and treatment of this syndrome were reviewed. The general approach to evaluation and treatment of symptomatic ischemia of the upper extremity was discussed.

Acknowledgment

Dr. H. A. Wenner permitted the inclusion of two of his case reports in this paper.

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Reye's Syndrome

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Surgery in Gastrointestinal Scleroderma

Subtotal Colectomy

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THE TRUE EXTENT of gastrointestinal scleroderma was first recognized in 1931, when Geoffrey Raké reported involvement of the gastrointestinal tract with scleroderma. The English literature contains 35 patients with scleroderma who underwent an abdominal operation. Only six of these patients had a primary colonic procedure, and no patient had over 50 per cent of the colon removed.[1–5] All six of these patients were operated on because of obstruction or infarction.

Case Report

A 51-year-old woman entered the hospital on September 20, 1966, with the chief complaint of "abdominal bloating." She had had progressive scleroderma since 1956. On examination it was found that she had Raynaud's phenomenon, with involvement of her entire gastrointestinal tract. She had been managed with Prostigmine, Urecholine, and Potaba. Her ninth admission (September 1971) was for dyspnea and increasing abdominal distention. She had chronic colonic obstruction with no bowel movement in the preceeding 14 days. Her dyspnea was due to a combination of pulmonary scleroderma and mechanical restriction of diaphragmatic movement by her distended colon *(Figures 1 and 2)*.

Physical examination on admission revealed a thin, white, cachetic female with a huge abdomen. She had limited ability to open her mouth due to the fibrotic skin. Her fingers were tapered with smooth, waxy skin. Fibrosis limited the motion of her fingers. Loops of dilated bowel were palpable through a thin abdominal wall. In anticipation of postoperative nutritional problems and long-term intravenous therapy, the patient was started on hyperalimentation. On September 27, 1971, the patient underwent a subtotal colectomy (90%) with a primary ileosigmoid colostomy. Approximately 200 cm of thick-walled, dilated, atonic colon was removed. It measured 10 cm in greatest diameter *(Figure 3)*.

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The microscopic sections of the colon revealed patchy and confluent areas of atrophy, dense fibrosis, and collagen replacement of the muscularis and submucosa *(Figure 4)*. There was fibrosis of the myenteric plexuses with extensive loss of ganglion cells. There was also an infiltrate of eosinophils and lymphoid cells.

The first subtotal colectomy (90%) in a patient with gastrointestinal scleroderma and a review of the English literature is presented. The surgical features of gastrointestinal scleroderma are discussed. Hyperalimentation is beneficial in the recovery from surgery.



Figure 1. Preoperative lateral view of the patient's abdomen on admission.

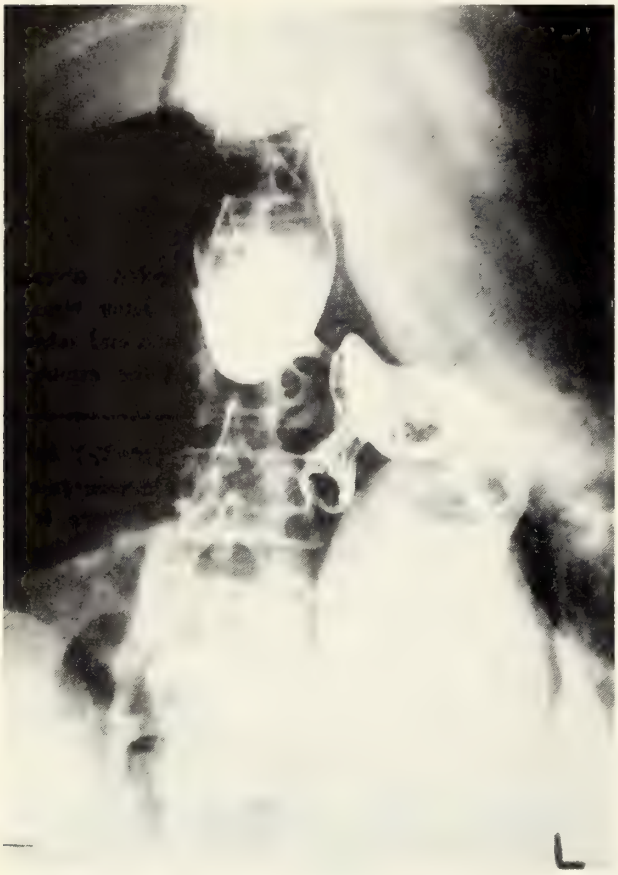


Figure 2. A grossly distended, redundant colon is shown. A volvulus of the distal colon projected to the left of the 3rd lumbar vertebrae.

The patient's postoperative course was uneventful, the main problem being that of alternating diarrhea and constipation. This responded to appropriate therapy. The problems of dyspnea and obstruction were completely relieved. She was discharged on her 31st postoperative day, doing well. The patient died 26 months after this operation. She achieved palliation of her intestinal symptoms for one and one-half years, and she was not bothered again by the restriction of her lung volume by abdominal distention. During her last eight months, reduced intestinal mobility produced distention and poor nutrition.



Figure 3. The resected colon at surgery.

Discussion

Scleroderma is a disease of the collagen connective tissue system of unknown cause. The basic process of scleroderma is fibrosis which may involve most of the major organ systems. The disease was first described in 1754, by Carlo Curzio.[6] His report, "An Account of an Extraordinary Disease of the Skin and Its Cure," however, dealt only with the cutaneous manifestations of the disease.

Involvement of the intestinal tract by scleroderma was first recognized in 1931, by Geoffrey Rake. A 30-year-old woman underwent an ileosigmoidostomy for obstruction of the descending colon. The patient expired, and autopsy showed involvement of the entire alimentary tract with the fibrotic process of scleroderma.[1]

Patients with scleroderma tolerate surgery poorly. From 1931 to 1956, there were no survivors after undergoing surgery for the problems secondary to gastrointestinal tract scleroderma. Of the 35 patients reported *(Table I)*, 22 (62%) died, most in the early postoperative period. Marshall[7] reported the first patient with gastrointestinal tract scleroderma to undergo abdominal surgery and survive in 1956.

Most of the 35 patients who were operated on presented with signs and symptoms of obstruction. However, at surgery no localized cause for the obstruction could be found. Most often, all that was found was thick-walled, dilated, atonic bowel. The findings of obstruction can be easily accounted for by the fibrotic process of scleroderma. The fibrosis, atrophy, and collagen replacement of the muscularis and submucosa leads to loss of peristalsis. This in turn leads to atony, distention, ileus, bacterial overgrowth, malabsorption, and anemia. These findings may all be present in gastrointestinal scleroderma.

The six patients *(Table I)* who underwent a primary colonic procedure were operated on because of obstruction or infarction of the colon. The first patient with gastrointestinal scleroderma to survive a colonic procedure was reported in 1960, by Edwards and Lennard-Jones.[2] Their patient underwent a left hemicolectomy for infarction of the descending colon due to vascular scleroderma. Fibrosis and collagen replacement of the intima and media of the vessels had produced the vascular occlusion. Two years later, Norton[3] reported a successful left hemicolectomy for chronic fecal obstruc-

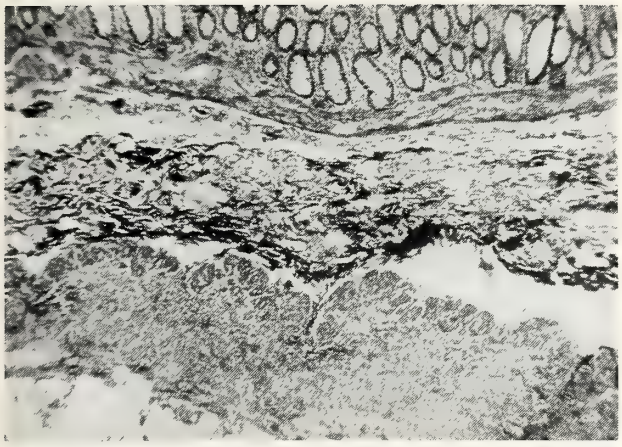


Figure 4. High power photomicrograph of a section of colon.

tion of the colon which was unresponsive to conservative therapy. Both of these patients also had chronically obstructed colons due to fecal impaction. Chronic fecal impaction of the colon is still another complication of gastrointestinal scleroderma. All four of the above patients were improved through surgery. Our patient had a chronically impacted colon. She often went for weeks without a spontaneous bowel movement. She was unique from the others in that, in addition to her colonic obstruction, she had respiratory distress due to pulmonary scleroderma and diaphragmic displacement.

Hyperalimentation played an important role in the recovery of our patient. She was sustained in positive nitrogen balance and achieved a weight gain in the early postoperative period.

TABLE I

SUMMARY OF OPERATIVE PROCEDURES PERFORMED ON 35 PATIENTS WITH GASTROINTESTINAL SCLERODERMA

Involved Region of G.I. Tract	*Survived but Unimproved* CASES	*Improved* CASES	*Died* CASES
Esophagogastric	2	0	2
Small bowel	1	3[a]	8
Colon	0	4[b, c, d]	2[e]
Celiotomy	4	0	9

a—First case successfully treated by surgery. Resection of 300 cm of jejunum.

b—First case successfully treated by colonic surgery (left hemicolectomy).

c—Left hemicolectomy for obstruction of the descending colon. The patient lived.

d—Two cases reported of left hemicoletomy for obstruction of the descending colon. Both patients lived.

e—First reported case of involvement of the gastrointestinal tract with scleroderma (reported by G. Rake).

35 patients: 9 male, average age 50.2; 26 female, average age 48.1.

Summary

The case of a subtotal colectomy in a patient with pulmonary and severe gastrointestinal scleroderma is presented. Our patient's presenting problem was respiratory distress due to pulmonary scleroderma and mechanical interference of the movement of her diaphragm by a huge, dilated colon.

Hyperalimentation allowed healing and a smooth postoperative course in our patient. The surgical morbidity and mortality in scleroderma patients who undergo abdominal surgery is high. They have increased problems with nutrition, wound healing, and fluid and electrolyte balance.

With the aid of modern surgical knowledge this type of patient can be helped.

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Ovarian Tumors

*The Ultrastructure of Benign Serous Cystadenomas**

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Wichita

THE CLASSIFICATION of ovarian tumors has long been a perplexing problem to the pathologist. The majority of ovarian neoplastic lesions are classified under the general heading of cystoma.[1] Histogenetically, this implies derivation from multipotential "germinal epithelium."[2] These tumors have had many histologic descriptions: simple serous cystoma, serous cystadenoma, papillary cystadenocarcinoma, and cystadenofibroma. The International Federation of Gynecology and Obstetrics (FIGO) currently adheres to an overall classification of serous cystomas. There are three basic classifications within their scheme. The first is designated as a benign serous cystadenoma. The intermediate lesion is identified as a serous cystadenoma with some nuclear abnormalities and proliferating activity but without evidence of infiltrative, destructive growth. The last category is frankly malignant and is called the serous cystadenocarcinoma. The structural characteristics of the most benign form of serous cystoma have been extensively evaluated with light microscopy and it is the objective of this report to demonstrate its basic ultrastructural morphology.

Materials and Methods

Biopsies of six cases of benign serous cystadenomas were obtained. The biopsy specimen was hemisected and one half was placed in 10% formalin for light microscopic study; the other half was cut into 1 cu mm blocks to be used for electron microscopic study. The material for light microscopy was sectioned and stained with hematoxylin, eosin, and mucicarmine. The material for electron microscopy was fixed for one hour in osmium tetroxide (1.33%) buffered to a pH of 7.3 with s-collidine containing 5.5% sucrose. Following fixation, dehydration was accomplished with increasing concentrations of ethyl alcohol, serial changes of 100% ethyl alcohol, and two changes of propylene oxide. The tissue was embedded in araldite. One-micron sections were prepared using a Porter-Blum MT-1 ultramicrotome. These were stained with Paragon multiple stain for light microscopic verification and study of the tumor. Ultra-thin sections were cut using an LKB ultratome III. These sections were stained with lead citrate and uranyl acetate, and examined with the Phillips EM 200 electron microscope. Micrographs were produced by the usual photographic means.

The benignity of cystomas and their likely derivation from coelemic epithelium are demonstrated.

Results

The benign serous cystadenoma is characterized as a single layer of non-proliferating cuboidal to low columnar epithelium when evaluated by light microscopy *(Figure 1)*. No mucin is present by mucicarmine stain and the underlying stroma appears loose and poorly developed.

Electron microscopy shows a cystic structure that is lined by a single layer of cuboidal epithelium that varies in its complexity and secretory activity. The cell surface possesses poorly developed microvilli. The cells are aligned on a basement membrane which rests on a loosely attached connective tissue stroma. Desmosomes attach these cells to one another and interdigitation of cell membranes is present *(Figure 2)*. The nucleus is small and has minimal irregularity of contour. The cytoplasm does not appear complex and con-

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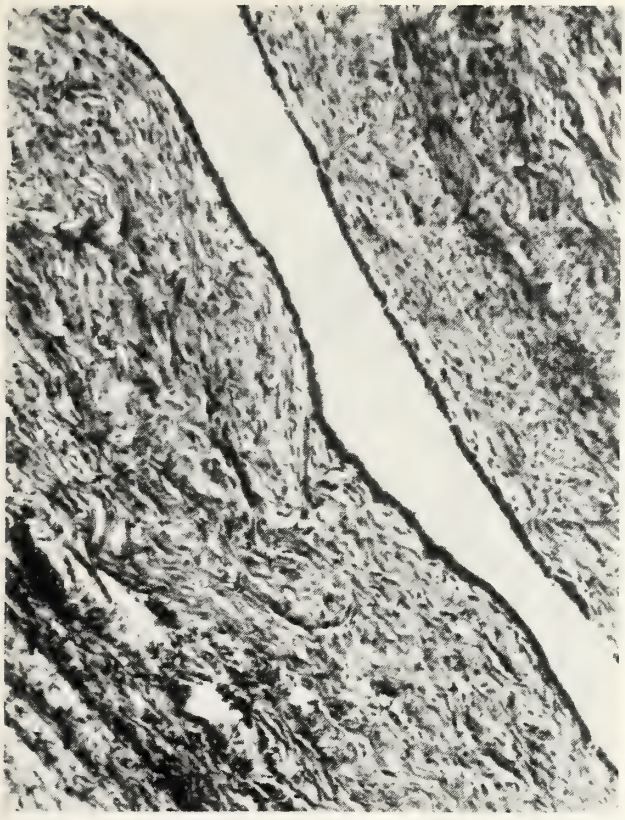


Figure 1. A single layer of non-proliferating cuboidal to low columnar epithelium. (×380)

tains the usual organelles, except for a marked lack of granular endoplasmic reticulum. Smooth vesicles are found throughout the cytoplasm, especially near the apical and basal portions. Polyribosomes are seen free in the cytoplasm.

Rarely, one finds cells with cilia *(Figure 3)*. The cytoplasm of these cells is somewhat more complex with a less orderly appearance of mitochondria. The Golgi's apparatus is present in its usual form. Nucleoli are seen

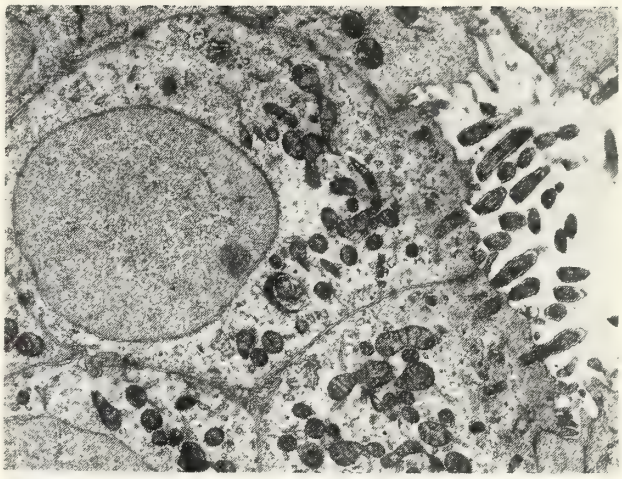


Figure 3. The cytoplasm is more complex than the non-ciliated cells. (×8,400)

but not prominent, and nuclear pores can be identified. Smooth vesicles remain the prominent type of endoplasmic reticulum. Desmosomes and membrane interdigitation are well developed.

The appearance of the lining cells varies from area to area, seemingly with the state of secretory activity. In some cells *(Figure 4)* the Golgi's complex is quite prominent with parallel arrays of smooth tubular membranes surrounded by numerous small vesicles. These smooth vesicles may be seen collected in groups and surrounded by a single membrane to form a multivesicular body; or, they may be scattered throughout the cytoplasm. They often are seen collected in small projections at the apical surface and, occasionally, appear to be joining with the plasmalemma in a fashion simulating reverse pinocytosis. Similar vesicles may be seen adjacent to the basement membrane.

Numerous tonofilaments traverse the cytoplasm of the cells and end up on the well-developed desmo-

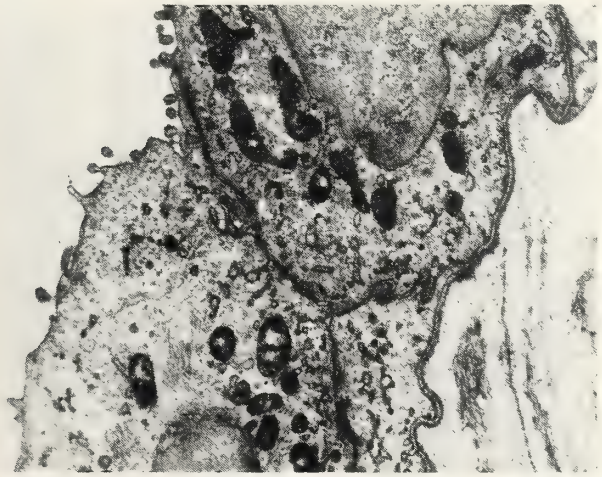


Figure 2. A single layer of cuboidal epithelium. (×10,200)

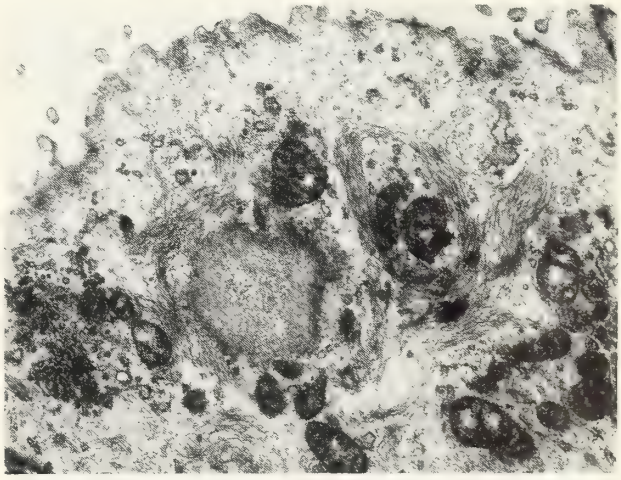


Figure 4. Well-developed desmosomes and tonofilaments are present. (×14,650)

somes. These filaments are often closely associated with mitochondria and with the nuclear envelope *(Figure 4)*. Dense osmiophilic bodies may be seen in these cells, some of which resemble lipid deposits and others which resemble lysosomes. The nuclear pores seem more prominent with this cellular appearance, and at times appear to be attached to the tonofilaments.

Still another appearance of these cells shows the nucleus slightly more irregular, but not markedly so. The cytoplasm contains considerably more dense bodies, a majority of which appear to be of lysosomal-like nature. The cytoplasm is denser, and more free polyribosomes are seen. Large vacuoles containing a lightly osmiophilic, flocculent material may be seen. Occasionally, apical bulging of this material can be noted. Likewise, similar material can be seen in the lumen of the cyst surrounded by a membrane, but unattached to any cell as far as can be identified.

Discussion

The subcellular morphology of the benign serous cystadenoma is as non-complex as one would suspect from the histologic appearance. Nuclei of the cells lining the cyst show no structural evidence of abnormality or marked activity. Cellular borders interdigitate freely with each other and are joined by well-developed desmosomes. A basement membrane is always present. The variability of the cytoplasm is not marked and appears correlated with secretory activity of the cells. There is no cytoplasmic suggestion of neoplastic change or increased activity as seen in the malignant tumors. In their simplest appearance, the lining cells are strikingly similar to mesothelial cells covering the ovary.[3, 4] They are also similar to the simplest type of cystadenoma briefly described by Zambernard[5] and Gondos.[6]

The different stages seen in these cells may well be the beginning of neoplastic differentiation of the multiple cell types seen in the less benign forms of this group of cystomas. They could as easily be variants of the normal *in vivo* activity of this type of epithelium prior to its sequestration from the surface of the ovary. The serous nature of the lesion does suggest a step beyond this normal function. Likewise, ciliated cells have not been reported in the mesothelial epithelium. The ciliated cells seen in this tumor resemble inactive fallopian tube epithelium.[1] They also are similar to a very simple form of those seen in papillary serous cystadenocarcinoma.[7]

The presence of numerous tonofilaments in these cells is intriguing. Their attachment to well-developed desmosomes is not surprising and is in keeping with other cell types.[8-10] Their close association with mitochondrial membranes, the perinuclear envelope, and nuclear pores deserves further study. It is likely that this appearance is the result of the plane of section, and that these prevalent structures are running adjacent to rather than connecting with these other membranes. However, some areas are highly suggestive of the latter.

No annulate lamellae, nuclear inclusions, aberrant mitochondria, macronucleoli or irregular, hypertrophied nuclei were observed. The specimens were closely selected not to contain mucin by light microscopy, which may account for the absence of this type of cytoplasmic inclusion. Although no cytochemistry at the subcellular level was performed on the cytoplasmic vacuoles and inclusions, the authors do not feel their appearance justifies a mucin label.

These cells suggest two types of secretory activity: apocrine and merocrine. The significance of the small, smooth vesicles at the basal as well as apical surface of the cell is unknown. These could suggest a transport of small molecules from a stromal or luminal source. They could equally suggest a discharge of a cellular secretory product via the reverse pinocytotic process in both directions (apical and basal); and could account partially for the looseness of the underlying stroma.

Conclusion

In dealing with serous cystomas, the benign serous cystadenoma in this study is at the most benign end of the spectrum of tumors. Cells of these tumors are essentially of one type and have the appearance of normal function. Ciliated cells, similar to cells normally seen in the fallopian tube, are only rarely present. The normal-appearing nuclei and cytoplasmic constituents, the numerous tonofilaments, the well-developed desmosomes, and the evidence of secretory function are all comparable to the components of normal cells and suggest the benign nature of these lesions.

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The American College of Sports Medicine

Position Statement on Prevention of Heat Injuries During Distance Running

Based on research findings and current rules governing distance running competition,* it is the position of the American College of Sports Medicine that:

1. Distance races (> 16 km or 10 miles) should *not* be conducted when the wet bulb temperature-globe temperature† exceeds 28C (82.4F).

2. During periods of the year, when the daylight dry bulb temperature often exceeds 27C (80F), distance races should be conducted before 9:00 AM or after 4:00 PM.

3. It is the responsibility of the race sponsors to provide fluids which contain small amounts of sugar (less than 2.5 gm glucose per 100 ml of water) and electrolytes (less than 10 mEq sodium and 5 mEq potassium per liter of solution).

4. Runners should be encouraged to frequently ingest fluids during competition and to consume 400-500 ml (13-17 ozs) of fluid 10-15 minutes before competition.

5. Rules prohibiting the administration of fluids during the first 10 kilometers (6.2 miles) of a marathon race should be amended to permit fluid ingestion at frequent intervals along the race course. In light of the high sweat rates and body temperatures during distance running in the heat, race sponsors should provide "water stations" at 3-4 kilometer (2-2.5 mile) intervals for all races of 16 kilometers (10 miles) or more.

6. Runners should be instructed in how to recognize the early warning symptoms that precede heat injury. Recognition of symptoms, cessation of running, and proper treatment can prevent heat injury. Early warning symptoms include the following: piloerection on chest and upper arms, chilling, throbbing pressure in the head, unsteadiness, nausea, and dry skin.

7. Race sponsors should make prior arrangements with medical personnel for the care of cases of heat injury. Responsible and informed personnel should supervise each "feeding station." Organizational personnel should reserve the right to stop runners who exhibit clear signs of heat stroke or heat exhaustion.

It is the position of the American College of Sports Medicine that policies established by local, national, and international sponsors of distance running events should adhere to these guidelines. Failure to adhere to these guidelines may jeopardize the health of competitors through heat injury.

Heat Injuries During Distance Running

The requirements of distance running place great demands on both circulation and body temperature regulation. Numerous studies have reported rectal temperatures in excess of 40.6C (105F) after races of 6 to 26.2 miles (9.6 to 41.9 kilometers). Attempting to counterbalance such overheating, runners incur large sweat losses of .8 to 1.1 liters/m^2/hr. The resulting body water deficit may total 6-10 per cent of the athlete's body weight. Dehydration of these proportions severely limits subsequent sweating, places dangerous demands on circulation, reduces exercise capacity, and exposes the runner to the health hazards associated with hyperthermia (heat stroke, heat exhaustion, and muscle cramps).

Under moderate thermal conditions, *e.g.* 18.5-21.3C (65-70F), no cloud cover and relative humidity 49-55 per cent, the risk of overheating is still a serious threat to highly motivated distance runners. Nevertheless, distance races are frequently conducted under more severe conditions than these. The air temperature at the 1967 U. S. Pan American Marathon Trial, for example, was 33.6-35.3C (92-95F). Many highly conditioned athletes failed to finish the race and several of the competitors demonstrated overt symptoms of heat stroke (no sweating, shivering, and lack of orientation).

The above consequences are compounded by the current popularity of distance running among middle-aged and aging men and women who may possess significantly less heat tolerance than their younger counterparts. In recent years, races of 10 to 26.2 miles (16 to 41.9 kilometers) have attracted several thousand runners. Since it is likely that distance running enthusiasts will continue to sponsor races under adverse heat conditions, specific steps should be taken to minimize the health threats which accompany such endurance events.

Fluid ingestion during prolonged running (two hours) has been shown to effectively reduce rectal

(Continued on page 157)

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* Adapted from Minard, D. Prevention of heat casualties in Marine Corps Recruits. *Milit. Med.* 126:261, 1961.

† WB — GT = 0.7 (WBT) + 0.2 (GT) + 0.1 (DBT).

The President's Message

Testibus Prehende . . .



Governor Robert Bennett has recommended to the Secretary of HEW that our great Kansas University Medical Center and Leavenworth, Wyandotte, and Johnson counties be separated from the rest of Kansas and placed in a "bi-state" metropolitan region Health Service Area under the terms of P.L. 93-641 (Health Resources Planning and Development Act of 1974).

Henceforth, KUMC will be forced to divide its initiatives, resources, and talents between its first and traditional obligation to the people of Kansas—a rural state in sore need of primary physicians and new directions in the development of rural health services—and the quite different needs of an urban population, most of whom live and pay taxes in Missouri!

Experiences with metropolitan Kansas City health planning authorities in the early phases of the current much-needed expansion at KUMC lend a note of naivete to the Governor's hope for "equal representation" between Kansas and Missouri elements in the HSA policy bodies.

How will the legislature view this situation when it recognizes that there is no *quid pro quo* for Kansas tax dollars used to develop KUMC as a source of health services peculiar to the needs of Missouri citizens? Will the Board of Regents retain its full authority to decide the direction of effort at KUMC? Such unanswered questions arise quite naturally out of the Governor's decision.

The Kansas Medical Society, through its Executive Committee and House of Delegates, has expressed strong opposition to the isolation of KUMC and the inevitable dilution of its effectiveness as the major resource for health education and leadership in development of new services for Kansas.

Concerned Kansas physicians, including eminent members of the KUMC faculty, have expressed their dismay, disappointment, and the hope that this decision can be reconsidered before our renowned medical school—alma mater to a majority of Kansas physicians—must with reluctant sadness face up to the truth embodied in the ancient Latin dictum:

*Testibus prehende, corda sequentur et mentes!**

Fraternally,

John W. Travis M.D.

President

* Translation on request.

(Ed. Note: At the request of the President of the Kansas Medical Society, the Editors of the JOURNAL *are pleased to provide to Governor Robert Bennett this opportunity to discuss the issues relating to health service area designation in Kansas, especially the matter of locating three Kansas counties and KUMC within a bi-state metropolitan area.)*

Dr. J. W. Travis, President
The Kansas Medical Society
1300 Topeka Avenue
Topeka, Kansas 66612

Dear Dr. Travis:

I have considered carefully your recent letter on behalf of the Kansas Medical Society. I hope to make a response worthy of the concerns which were expressed.

This is neither the first nor the final defense I must make to support my decision concerning health service areas in Kansas. Yet, it is one of the most important because of the respect from throughout the state which is shown the Kansas Medical Society and because of the sincere and significant statement which the Society has made through its Resolution 75-27. Allow me then to indulge your patience by elaborating on my position at some length.

On May 7, the House of Delegates of the Kansas Medical Society adopted a resolution expressing its opposition to my decision to recommend a bi-state health service area for the Kansas City standard metropolitan statistical area. Your letter of May 14 brought the resolution to my attention and articulated your concern over the possible impact of my decision upon the University of Kansas Medical Center and its capacity to serve the needs and interests of our state.

As you know, my decision was made in response to the requirements of P.L. 93-641, the National Health Planning and Resources Development Act of 1974. The act calls for designation of health planning areas by the Governors of all states.

Initially it was my desire, if at all possible, to keep all planning areas located within Kansas. I instructed the Secretary of Health and Environment, in his designation, to try and develop an acceptable plan to this end. A series of hearings were held throughout the state. We engaged in long deliberations which considered, among other factors, the opinions of professionals and consumers alike, the boundaries and capacities of existing planning regions, and the realities of health services in the states strongly affected by divergent demographic variables. You will recall that in my final consideration of the boundaries of the several proposed areas, I made a number of modifications as a direct result of your recommendations.

Since my earnest desire was to establish HSA boundaries totally within our state, my second decision to permit a bi-state designation in the Kansas City SMSA was extremely difficult. During the long period of study, hearing and deliberation we carried on negotiations with the Governor of Missouri and with the federal government in an effort to obtain some assurance that we could successfully divide the Kansas City SMSA, realizing that under the law the burden would be upon us to prove that such a division would meet the criteria specified.

Our negotiations in this regard were near fruitless. We were advised that the federal government did not want to divide bi-state SMSA's; that even were I to recommend such a division it was unlikely that it would be accepted and that HEW would then make whatever division or designation they wanted but that such designation would not divide a bi-state SMSA; that absent agreement between the two states it would be near impossible that equal bi-state representation could be obtained and that Kansas would probably be outvoted in such a planning area; and, that if this area had any chance for a national health institute, it would probably be lost in such a division.

In short, we were given absolutely no hope of success in recommending a division of the Kansas City SMSA and it was clearly indicated that if we followed this course, we would leave to the vicissitudes of federal bureaucracy the treatment of the rest of the state as well as the governance of the Kansas City SMSA planning area.

We negotiated with the Governor of Missouri and he indicated that he would leave the matter to local decision and didn't feel he could commit to a division which commitment was near tantamount to success in this regard.

As a result of these negotiations and realizing some of the dangers that might be involved, we made an initial designation which would have divided the Kansas City SMSA, hoping against hope that we could still work out an equal representation plan with federal, Missouri and Kansas City SMSA approval and cooperation. This ultimately was done. MARC agreed to equal representation. The Missouri Governor agreed to support equal representation. The federal government agreed to favorably consider equal representation. Since this alternative seemed much more palatable than what appeared to be a useless gesture in the exercise of state sovereignty which would be quickly dashed to bits on the rocks of federal bureaucracy, I made the bi-state area recommendation of which you complain.

While I would have preferred a plan making designations entirely within the State of Kansas, I really never had this option open as an effective alternative. It was either let the federal government do it and lose an effective voice in equal representation or act for the state

and have an assurance of that voice and representation.

I should say, however, that in all frankness my decision to recommend a bi-state planning area in the Kansas City SMSA was, while motivated by the above mandates and insistences, also made in order to reflect existing consumer patterns in that area which are now well established to expedite continued exercise of health planning on a regional basis and to continue cooperative planning currently conducted with the equal or near equal representation between the two states.

The matter of equal representation was pivotal in my considerations. Allow me to quote a passage from my letter to Mr. Caspar Weinberger, Secretary of Health, Education and Welfare, in which I made my recommendations.

> "I would be less than frank if I did not state that should a health system agency application be ultimately approved which does not provide for equal voting representation between these two states, it would be my avowed intention to apply for, and exert every effort toward, a division of the bi-state area, and a designation of Leavenworth, Wyandotte and Johnson counties as a Kansas health service area."

I jealously defend the principle of state sovereignty, and will exert every effort to protect it from any further attempts by the federal government to encroach upon our rights and responsibilities in this regard.

I also share your concern regarding the impact of this issue upon the University of Kansas Medical Center. Once again referring to my letter to Mr. Weinberger, I stated,

> "In this particular case, the Kansas portion of the Kansas City SMSA constitutes the academic health center for the state of Kansas. Practically every health profession in Kansas looks to the state's only medical school for continuing education and consultation. The Kansas Legislature has appropriated the sum of $63.6 million for the operation of this school, of which $21.9 million was appropriated from the state general fund for its support. The possibility, though remote, that the state's authority over this medical school and hospital might be in any way diminished or diluted, mandates that it be protected against such an eventuality. That protection can occur if the governing body of the bi-state health systems agency has equal representation both for Kansas and Missouri."

If Mr. Weinberger or anyone else should misconstrue my resolve in this matter, I am prepared to take whatever action may be necessary to protect the integrity of service which the Medical Center provides to Kansas and to make secure the public vested interest which Kansas holds.

I salute and totally agree with your commitment to provide the best possible health service to rural areas of the state. You are regrettably accurate in your recognition of the scarcity of doctors in those areas and in recognizing the role of the Medical Center in resolving this dilemma. The Medical Center is vital to health planning throughout the state, and I intend to use the influence of this office to remind the Kansas City health systems agency of that fact.

In short it must be admitted that health planning for the Kansas City area must consider the intermingling which occurs both among professionals and among consumers with little regard for the state boundary. At the same time, the resources built over the years by commitment of Kansans to quality medical service must not and will not be compromised as they apply to the entire state. In the final analysis, the ultimate responsibility for the operation and development of the Medical Center will remain in Kansas—in the Legislature, in the Board of Regents, in the Governor, and in the citizens. I am irrevocably committed to this concept.

Be assured that I share your concern, and that I appreciate your candor and sincerity. Please feel free to share these thoughts with the House of Delegates and with the Kansas Medical Society. Thank you for the opportunity to discuss this important issue with you.

Very sincerely,
ROBERT F. BENNETT
Governor



Editorial COMMENT

Practice, Mal and Otherwise

Probably no single facet of medical practice illustrates the shifting attitudes and values that have come about in the past generation better than the malpractice situation. It seems not so long ago that physicians functioned under the concept that they could do no wrong—though Nature who provided them with their greatest victories was not above tripping them up occasionally. Malpractice suits were more an implied than actual threat, and premiums for malpractice insurance were not much more than a necessary nuisance. The actuality of a suit was a dreaded assault upon professional integrity, reputation and ability, and, whatever the results, felt by the defendant to be an ineradicable stigma. Today, the increased frequency of suits has brought the threat much closer to actuality and malpractice premiums are seriously threatening the continuation of medical service, the two, of course, going together. And gradually, the feelings of the profession toward such suits are undergoing a slow and uneasy alteration toward the acceptance of the concept that bad results do occur and some compensation for the affected—so long as it can be provided with little or no reflection on the physician—is justified.

Some solution to the problem of providing uninterrupted liability insurance must be found. Certainly the effort is being made and the public must surely be more aware of the problem than it ever has been. However, emergency solutions which will assure the availability of medical service—which is the immediate objective of most of the efforts at the moment—do no more to resolve the basic problem than does amputation of the gangrenous leg cure the diabetes. Such resolution will be hard to come by, requiring, as it will, the altering of some deeply entrenched attitudes and prejudices. The value derived from diatribes directed at the legal profession or the insurors or potential plaintiffs will be, at best, limited. The most serious problem confronting the medical profession is the ordering of its own house.

Self-policing is never an easy process. Organized medicine laid the groundwork by separating allopathic medicine from the multitude of quasi- and non-scientific entities of a century ago, bringing about the combined state-professional control expressed in licensing boards. The upgrading of medical education provided first a basis for standards of training, then extended to include formal and informal postgraduate education. Specialty examining boards have evolved but are primarily of voluntary nature without direct legal clout. The state examining boards, once their primary function of licensing the physician had been accomplished, had and exerted little disciplinary control, largely because it required vigorous effort on the part of the profession to bring the necessary charges, and the public was rarely interested. (A few old timers, for example, may recall the popular and press resistance to the lifting of John Brinkley's license.) In general, the profession has left the practice-qualifying to the boards and subscribed to a concept of individual function with formal incursions or restrictions only in the most blatant cases. And this is at least understandable to anyone who has had to experience the distress and soul searching that goes with disciplinary action against a colleague.

But the current malpractice situation, an expression of the social eruptions of the day, is demanding renewed and intensive review of intramural controls. A variety of direct and indirect activities within the profession are already evident: revision of licensing procedures, establishment of relicensing, increasing requirements for continuing education. Two features, however, seem to emerge as fundamentals if the case reports of liability actions can provide us with valid information. First is the ability of the physician—ability in the broad sense and, in its specific measure, in the individual sense. Second is the ubiquitous problem of communication—rapport—physician-patient relationship—however you want to put it.

Basically, the profession must recognize that all physicians are not equal. They range from the grossly incompetent to the highly expert with a myriad of factors operating upon the quality of care at any given time. Clearly it is essential for the welfare of the profession as well as the public to eliminate the grossly incompetent physicians, whether the incompetence resides in lack of medical ability or character defects making them unsuitable to carry the burden of medical responsibility. Control of such individuals has been left largely to the licensing boards with the professional organizations rarely facing up to any prior responsibility. For one thing, the problem has often been made more difficult by the fact that old age, disability or some addictive state obtained, and the attitude of the individual's colleagues has ranged from compassion to an uncomfortable disregard. But one other feature which makes it a difficult situation—and perhaps one reason such individuals do not figure in malpractice litigation more frequently—is that they often have a firmer hold on the affections of their patients than do their professionally superior colleagues—particularly the elderly. Even if ability is deficient or impaired, their communication with a significant number of patients is good and it will take astute and diplomatic management to remove them from the medical scene.

A somewhat stickier problem is posed by those individuals of borderline competence—of adequate training but failing to extend that training or gain by experience. The danger lies at the moment when they are required—knowingly or unknowingly—to exceed their ability or to function beyond the limitations of their facilities. Failure to recognize the need for and to obtain consultation or the absence of supportive contact with colleagues can adversely affect professional capabilities. The combination of personality and intellectual features which control them make them unlikely candidates for professional assistance in elevating their capabilities. And, because the boundary lines between these arbitrary classifications are dim at best, they will be harder to identify and subject to peer control. Their protection and their patients' welfare depend upon their own respect for their limitations, whatever capacity they have to maintain a mutually productive relationship with their patients, and that marvelous protective power that is constantly watching over all of us and making up for our deficiencies.

Hopefully, the majority of physicians fall into a group characterized by competence enhanced by alertness, intellectual growth, and respect for the obligations inherent in medical practice. If heaven is such a wonderful place, the angels must have to work to keep it that way. But even the highest ideals and the worthiest competence cannot guarantee against the unexpected or unprepared-for emergency, the unforeseen shortcomings of an assistant, the tangential relationship which makes a defendant out of an apparently innocent bystander. The anticipated risks, the undesirable though not necessarily inappropriate results, the transient human limitations of distraction or fatigue which provide the constant culture medium for litigious reaction have always been accepted as realities of practice which the profession has felt should be exempt from compensation. It is in this area that the complete recording of information, even if at the moment it seems to reflect unfavorably on the case, and full communication to the patient and family about the course of events, even if there seems a risk of adding to their burden or exposing the management to question, has been shown repeatedly to be an effective and essential defense against such action.

But while the elimination of incompetence has been loudly called for, a striking feature of the current upsurge in malpractice actions has been the frequency with which the defendants have been of impeccable professional standing, even recognized authorities, the archangels. It must be recognized, of course, that even in the higher reaches of professional and academic function, technical expertise is not always matched by judgment, or zeal for a particular course of action may distort the perspective. No one reaches this level without being driven by a certain number of devils. The PDH (prima donna hormone) level is apt to be high and, more often than in the lower levels of function, there is a counterpart in some other Ivory Tower who is not unwilling to call attention to his rival's untoward results. Furthermore, these individuals are more apt to get the problem cases—those which have been inadequately or inappropriately handled—and are confronted with the aggravated risks. Not infrequently, the consultative status means that, however great their reputation and ability, they do not establish the emotional hold on the patient that might be a deterrent to subsequent action when the result, good as it may be under the circumstances, is not satisfactory to the patient or his family. In this area more than any other probably, the only protection is in effective communication and knowledgeable acceptance by the patient and of the risks involved.

These comments obviously and by prior intent do not begin to address the salient features of the malpractice problem that are getting such wide attention these days. The best they can hope for, then, is to bring some

(Continued on page 156)

Official Proceedings

1975 Annual Meeting of the House of Delegates

Transactions of the 116th Annual Session of the Kansas Medical Society are published in this issue of the JOURNAL.

The resolutions were referred to Reference Committee A (J. Gilleran Kendrick, M.D., Wichita, Chairman) or Reference Committee B (Arthur C. Cherry, M.D., Topeka, Chairman). The resolutions are printed in numerical order under the minutes of the Second House of Delegates meeting. Resolutions No. 75-19 and 75-24 had been placed on the consent calendar and were adopted at the meeting of the First House, on Sunday, May 4, 1975.

The resolutions which failed to pass are retained in the official minutes at the Executive Office, but are not recorded here.

FIRST SESSION

The first session of the House of Delegates of the Kansas Medical Society met on Sunday, May 4, 1975, beginning at 9:00 AM at the Glenwood Manor Motor Hotel, Overland Park.

The meeting was called to order by Clair C. Conard, M.D., Speaker, who explained the composition of the House and placed some rules before the body, which he said would be followed until such time as the House elected to challenge them.

Jack D. Walker, M.D., Mayor of Overland Park, extended a welcome and expressed appreciation to the Kansas Medical Society for holding its meeting in Overland Park this year.

Minutes of the May 1974 and of the November 1974 meetings of the House of Delegates were approved.

Re-elected by acclamation were Clair C. Conard, M.D., Dodge City, Speaker, and M. Robert Knapp, M.D., Wichita, Vice-Speaker.

The House heard the following reports.

The Constitutional Secretary

Phillip A. Godwin, M.D., Constitutional Secretary, presented the following summary of the membership of the Society for 1975.

Dues Paid Members	1,512
Emeritus Members	92
Leave-of-Absence Members	12
Personal Exemption Members	4
Retired Members	121
Service Members (Armed Forces)	4
Delinquent Members	389
Honorary Members	3
Total	2,137

This compares with the membership in previous years as follows:

1969 Total Membership	1,909
1970 Total Membership	1,921
1971 Total Membership	1,990
1972 Total Membership	2,003
1973 Total Membership	2,033
1974 Total Hembership	2,078

Necrology Report

The following names of members of the Kansas Medical Society whose deaths have been reported since the last annual meeting of the House of Delegates was presented by David E. Gray, M.D., Chairman of the Necrology Committee.

Name and Address	*Age*	*Date*
Harold R. Barnes, *Hutchinson*	74	Feb. 22, 1975
Kellogg F. Bascom, *Manhattan*	82	May 3, 1974
Lynn E. Beal, *Fredonia*	68	Apr. 29, 1974
Cyril C. Brown, *Wichita*	76	July 22, 1974
George A. Chickering, *Hutchinson*	88	Nov. 27, 1974
Porter M. Clark, *Independence*	77	Jan. 23, 1975
John I. Davies, *Topeka*	56	Jan. 7, 1975
Abraham C. Eitzen, *Hillsboro*	83	July 4, 1974
Frederic B. Emery, *Concordia*	57	June 27, 1974
Leland F. Glaser, *Hutchinson*	71	Dec. 20, 1974
Charles V. Haggman, *Concordia*	98	Nov. 16, 1974
Millard W. Hall, *Wichita*	84	Oct. 3, 1974
Mayro O. Hedge, *Kansas City*	87	Jan. 23, 1975
Charles H. Johnson, *Shawnee Mission*	63	Apr. 18, 1975
Francis D. Kennedy, *Norton*	84	Feb. 8, 1975
John H. Lathrop, *Scott City*	58	Jan. 27, 1975
Warren W. McDougal, *Atwood*	59	Nov. 2, 1974
Noble E. Melencamp, *Dodge City*	86	Nov. 12, 1974
Richard L. Merkel, *Topeka*	60	Aug. 15, 1974
Earl G. Padfield, *Salina*	87	Mar. 24, 1974
Perry D. Petterson, *Wichita*	53	June 1, 1974
Mirl C. Ruble, *Cherryvale*	79	Jan. 27, 1975
Harry Salomon, *Topeka*	77	Nov. 5, 1974
John W. Schmaus, *Iola*	46	July 7, 1974
Edward J. Schulte, *Shawnee Mission*	74	Apr. 7, 1975
Tom W. Stivers, *Hutchinson*	48	Aug. 9, 1974
Gerald C. Unrein, *Hays*	82	Feb. 17, 1975
Harry J. Veatch, *Pittsburg*	77	Sep. 9, 1974
Victor E. Watts, *Smith Center*	96	Dec. 31, 1974
Harold H. Woods, *Topeka*	80	June 12, 1974

The Editor—David E. Gray, M.D.

I bring you greetings from your editorial remittance men. While we are not dallying with the maidens on some tropical isle in the usual pattern of that designation, we are basking in the joy of knowing those checks will keep coming from home as long as we stay away.

My reports of the last couple of years have reflected the unwonted cheeriness of solvency, a condition which was relieved this past summer when our financial cupboard became so bare even the cockroaches moved out. In the noblest tradition, our last dollars were spent on a steak dinner for the Editorial Board, over which the matter was discussed in the *deja vu* aura which has marked our meetings in recent years. The result was that we forwarded to the Executive Committee a variety of suggestions aimed not so much at solution as being able to say, whatever the Executive Committee decided, that we thought of it first.

Out of this came a plan which the Editorial Board has chosen to interpret as a resounding vote of confidence, but was probably meant to indicate more an attitude of sufferance of an annoyance comparable to an itch in an inaccessible place. The essential points included:

1. Increase in subscription price of the JOURNAL to $10.00 for members as well as non-members.

2. Economy of production by designating the April issue to be limited to publication of the program for the approaching annual meeting, and the August issue to be the annual edition of the directory of the Society. This not-too-subtle maneuver obligates the Society to pay for these issues completely rather than in part as has been the case in the past. Bookkeeping is a marvelous thing.

3. If and when (and probably) the funds are depleted before the end of the year, the Board will routinely throw itself on the mercy of the Council with the assurance that, until that august group is populated with more astute individuals than is presently the case, we shall be bailed out. At least, it seems unlikely we'll be allowed to go under completely as long as we continue to carry the President's Page.

4. The Editorial Board in return agrees to forego any requests for cost-of-living increases in salary.

Such wisdom and foresight on the part of the Council is the reason I can report to you that the JOURNAL OF THE KANSAS MEDICAL SOCIETY is the oldest monthly periodical listed in the Ayer Directory of Publications. Congratulations—I think!

On the editorial side, the JOURNAL has continued to enjoy enough offerings that we have not had to resort to lifting too many fillers from other sources and have even received occasional requests from distant points for permission to use something we have published. As usual, we urge the membership to avail itself of the columns of the JOURNAL, VOX DOX or otherwise, for intercommunication but with something of the same feeling of the father who urges his daughter to get in early from a date—the hope is there but past experience does little to sustain it.

Again as usual, this is my happy opportunity to pay tribute to that lovely lady of many accomplishments, your Managing Editor, Val Braun. It is no secret that she carries the real load in the publication of the JOURNAL and I, more than any other, am aware that the Society could dispense with the Editorial Board and turn the JOURNAL over to Val completely with nothing but salutary effect. My realization of our good fortune in having her is in a constant state of renewal.

Barring impeachment (which, of course, is to be shunned because of its divisive and traumatizing effect, especially on the impeachee), I shall return next year with my tale of the further harrowing adventures of that intrepid band which brings you the oldest—and poorest (financially, mind you)—monthly periodical on the list. Meantime, we leave you to lesser problems with our thanks for your support and that last full measure of devotion, your cash.

President—John N. Blank, M.D.

All great things have a beginning and an end—these thoughts came to me as I began preparation for this address to this distinguished body. This will be my last address before this House of Delegates of the Kansas Medical Society. It will also be the shortest. I would be less than honest if I were to pretend that there is no touch of sadness in my heart as I stand here for the final time.

You know it is not easy to walk away from something that has been very much a part of you for most of your adult life. The memories of 36 years are very much with me. As I leave the titular responsibilities and management to others, I feel the anguish of a reluctant parent. Now I more fully realize the agonies of the bride's mother.

I started to college 46 years ago. After all these years one reaches a maximum where there is nothing more to give. I have reached that place, it is time to move on and try something else—retirement never; another life, a new vocation—a certainty.

It is literally true that, in the intervening 36 years, I have always given considerable time and substance to the Kansas Medical Society. They have been exciting years, marked by frequent turmoil, always in an en-

vironment of unrelenting crises; but they have been rewarding years.

Another distinguished person who has served the Kansas Medical Society well is attending this House of Delegates in a responsible position for the last time. It is my great privilege to have known, served, and benefited greatly by an association with Oliver Ebel. Oliver Ebel has put in over 30 years of dedicated service on behalf of the KMS, but I would also point out that these benefits are two-sided: while Oliver Ebel has contributed much to the Society—in many ways that were not always obvious, Oliver has received many benefits as well. Through our organization, he has had an opportunity to realize the full potential of the skills and abilities he possessed. This, I say to you, Oliver Ebel, is a fulfillment many men never enjoy. This is an eloquent truth that literally applies to each of us. Both of us are vastly indebted to the Kansas Medical Society for these opportunities, and I, for myself, am grateful. A part of each of us is in the KMS, and the KMS will forever be a part of us.

I have always been rewarded by the inspiration that comes from participation in any great or worthwhile cause. I have given my fair share of time, substance, and effort in contributions to the cause of medicine and public health in Kansas, and from each I have gained insight and knowledge. The cherished friendships I have made along the way will always be among my finest possessions.

I promised a short speech—that part you've had!

One year ago, in the remarks to the House of Delegates, which I had structured with the intent of presenting to the House for action and referral to the reference committee, were my plans for the year 1974-75. However, one very important detail was unknown to me: in no way was such a presentation proper. The format of the meeting does not allow for such things. I believe most of you did receive the remarks. They contained observations about our continued growth as an organization—and I did submit to you several recommendations as to future policies and actions.

This year, as your President, has been a busy and a gratifying experience. In all my activities, I have attempted to appropriate my time and efforts so that I might serve the interest of all KMS members, whether they be in solo or group practice, private medicine, teaching, emergency medical care, occupational medicine, or the military.

Since that last House of Delegates meeting in Emporia, I have represented the Kansas Medical Society by participating in meetings in many Council districts and county medical societies. I have attended both AMA meetings; I attended the AMA Leadership Conference in Chicago. I also attended two national meetings of AAFP. I have had many conferences and meetings with state legislators, discussing usually the problems relating to Kansas medicine and the Medical School, both at Kansas City and the Wichita Branch.

Now, I would like to share with you some of the more important activities which I have endeavored to pursue during my year as your President.

Minority Medical School Applicants

I am sure most of you agree, it is not fair to discriminate against the student who has the scholastic ability to be admitted to the Medical School in favor of the minority applicant who does not. I do not believe that our medical schools should be forced to lower their standards for admission of minorities to the medical schools. In the class of 1975, to meet the federal requirements, 20 such minority students were admitted, many of whom were not residents of Kansas. In the legislation which I proposed for funding of medical students, I am assured under the provisions of the bill, that the Board of Regents has the authority to identify these minority students, financially aid them in college so that they may have the opportunity to become scholastically excellent to be admitted to our medical schools on that basis. The bill was written and discussed; it will be carried over for study this summer.

Funding for Medical Students

You are all familiar with the federal requirements for funding of medical students. I proposed that a similar setup be made available to Kansas students, funded by Kansas legislature—this to be on a voluntary basis. If the students took Kansas funds, they would be required to pay off these loans under the same obligations as the federal funds, except it would be in the state of Kansas, where they would do their service. Provisions under the present bill being carried over for further study also include the funding of osteopathic students and funds for possibly as many as 24 slots in each class of medical school students who make a declaration to enter primary care.

Usual and Customary Payments for Welfare Recipients

A strong pitch was made for this concept, the argument being that usual and customary fees are primarily for the patient's benefit. This would enable the physicians to care for the patients and remove from them the stigma of second-class citizens.

Reorganization of the State Board of Health

This reorganization was mandated by the legislature.

I honestly believe we have a good rapport with the reorganized agency. There is no doubt that Mr. Dwight Metzler will run his program as he personally believes it should be run. Just as surely, I believe that Mr. Dwight Metzler will consider the private sector of medicine in all of his decisions.

I believe that the designation of this new agency as the State Department of Health and Environment was proper. I think that the designation of some three health service areas in Kansas will, or could be, a workable plan. As I prepare this report, I do not know what the outcome will be with respect to the Kansas City area. However, it seems to me that a workable solution might be found by including in the Metropolitan Kansas City area the counties of Johnson, Wyandotte, and Leavenworth.

Department of Social Welfare

One of our perennial concerns is the Secretary of the Department of Social and Rehabilitative Services. In all fairness, I believe Dr. Harder does an excellent job in the administration of this department; please consider all his immense problems. But it would be only proper if the doctors of Kansas could be assured the Secretary must bargain in good faith with the private sector of medicine for medical care recipients of public assistance.

KUMC—Wichita Branch

The Kansas Medical Society supports the ongoing programs for expansion of the Medical School, with emphasis on the Wichita State University Branch. We support the acceleration of the program in Wichita.

Governor's Advisory Committee

As far as our relationship with the state government is concerned, I suggest and support the idea that the Governor seek an advisory committee from the private sector of medicine on public health, welfare, and environment.

Malpractice

I purposely have not discussed malpractice. We have a strong, active, and a very well motivated Malpractice Committee functioning on nearly a full-time basis. Dr. Gregg Snyder heads that committee. He and his committee deserve and solicit your support.

Chiropractors

Several years ago, the chiropractors were included in the Healing Arts Act—according to the legislators at that time—so that they could be restricted, watched, and their practice procedures evaluated to avoid medical hazards to the Kansas sick. Personally, I never did "buy" that reasoning. At the insistence of the members of the Healing Arts Board in 1974, the Act was reopened to do a few housekeeping chores. It had been agreed that if any one of the three disciplines involved objected to any of the changes, there would be no changes made.

In the original draft, the chiropractors asked for the privilege of drawing blood for diagnostic purposes, and this implied the interpretation of the results and eventual laboratories in their offices. We objected to this feature, and it was withdrawn. Seemingly, we were one large happy family as far as the bill was concerned. It was reported out of the study committee as in full agreement. This year, in the Senate hearings, Sen. Pomeroy, in response I am sure to some political obligation, tacked on an amendment allowing the chiropractors to draw blood for diagnostic purposes. I objected vigorously to this in the open hearing, drawing the wrath of Sen. Francisco, of Wichita. Eventually, the committee reported out not only the amendment tacked on to the bill, but added another one, licensing naturopaths. This was then sent to a conference committee for study, later referred to two other committees, and finally carried over to next year for further study.

According to Oliver Ebel, we will be having an excellent year if we do not lose this one. Being carried over for study probably means the amendment's defeat, if we keep resisting. So, I think, we have had a good year in the Kansas Legislature.

Other Legislation

The Kansas Medical Society did support the Highway Safety Act. The KMS did and does support the Outreach Program for residency training in Kansas. The legislators look with considerable favor upon this type of programs. I, as well as other members of the Society, further encouraged the legislature to dwell upon this subject and to encourage towns and cities in outlying areas to participate in these programs.

Legislative Committee

This very important committee has now had three years of experience dealing with problems facing medicine in Kansas today. This committee, along with Oliver and Jerry, have influenced the contents of many bills by walking the legislative halls and reiterating the KMS position. Many legislators seem to possess no more than a vague idea of what it means to be a physician and what the training should be. We have all heard and read surveys which point out that most people think more highly of their own physician than they

do of the medical profession as a whole. No one physician by himself constitutes organized medicine, but in the aggregate that is just what we are. And whether we like it or not, the people who are initiating and enacting health legislation do so on the basis of their perception of organized medicine, rather than the perception of their own physicians.

The laws they write too often reflect their disappointments, their fears and hopes. If we fail to provide legislation or solutions to what they consider to be problems, we can expect legislation that will be self-defeating (such as for example the amendment to the Healing Arts Act of 1975).

This hard-working committee merits your confidence and enthusiastic support. They met weekly during the legislative session and provided numerous inputs into legislative hearings; they gave testimony during the hearings in the summer. Many members are present here today—they deserve your enthusiastic applause.

Commissions and Committees

While not the glamor boys this year, it is the chairmen of the commissions and committees who actually carry on the main function of the Society. All commission chairmen have been active, this being reflected in the resolutions to be considered by this House of Delegates. By being a member of a committee, individuals have the opportunity to participate in Society business and policy making. For the sake of the new physician in his early years of practice, we should be increasingly active and effective in keeping before him the necessity of being involved with the state medical society.

I commend for your consideration the resolutions from these commissions.

Medical Auxiliary

Under the able leadership of Mrs. Warren E. Meyer, the Auxiliary has been most active. I attended one of their workshops in Wichita. The enthusiasm and motivation of this group was contagious. I wish to express the admiration and the good feeling we have toward the Auxiliary for the fine PR effort they do in our behalf. The Kansas Medical Society wishes to express our considerable appreciation for the many activities in which the Auxiliary is involved for only one purpose—to enhance the public image of medicine.

The Kansas Medical Society and Our Staff

The Kansas Medical Society, I assure you, is in sound financial condition, in contrast to the AMA. I challenge this and every House of Delegates to take a searching and penetrating look in depth at the expenditure operation, and the viability or necessity of the many programs and committee functions we support. I never wish to attend a KMS House of Delegates and find a repeat of the anger and frustration that prevailed throughout the meeting in Portland, Oregon. If inflation continues, a dues increase in two to three years will be indicated. Delegates, it is your obligation and ability to set the course of action for this Society. A fully informed House of Delegates, through reasoned and seasoned debate, I have always had the supreme confidence, would come up with the proper solutions.

The Kansas Medical Society has an able, experienced, and highly trained staff. The administrative organization built up over the years is strong, effective, and versatile enough to accomplish any task reasonably demanded of it by the Executive Committee or any of the standing commissions or committees.

The KMS has come a long way since I first joined, in 1939. With an unyielding constancy to the ideals and goals of medicine, while simultaneously but painfully adapting to changing circumstances, the KMS has maintained a position of eminence in medicine. It does have influence, respect, and the authority that comes with the dignity of always appraising the past and looking to the longer future.

As for myself, I am proud to have contributed a small part to the history of Kansas Medicine. As I said at the beginning, after 36 years, one reaches a point in physical and mental commitment where there is nothing more to give—then it is time to move on and try something else. I take intense gratification in having come through this year with no visible scars. I believe, I have been a part of all things done—and because of this, my life has been richer and fuller.

SECOND SESSION

The second session of the House of Delegates was called to order by the Speaker, Clair C. Conard, M.D., at 8:30 AM on Wednesday, May 7, 1975, at the Glenwood Manor Motor Hotel, Overland Park.

The House was temporarily recessed to convene a meeting of the Corporate Body of the Kansas Foundation for Medical Care, Inc. (for a report of this meeting, please see Page 153, Kansas Foundation for Medical Care).

The House was reconvened and ballots were distributed for the election of officers. The following results of the election were reported:

PRESIDENT-ELECT: Emerson D. Yoder, Denton
FIRST VICE PRESIDENT: John D. Huff, Kansas City
SECOND VICE PRESIDENT: Warren E. Meyer, Wichita

CONSTITUTIONAL SECRETARY: Phillip A. Godwin, Lawrence

TREASURER: Edward G. Campbell, Emporia

AMA DELEGATE 1976/77: Clair C. Conard, Dodge City

AMA ALTERNATE DELEGATE 1976/77: Lew W. Purinton, Wichita

The caucus of the Council districts announced the selection of the following elected representatives to serve as Councilors from their respective districts:

DISTRICT 1—Roger D. Warren, Hanover
DISTRICT 3—Lewis G. Allen, Shawnee Mission
DISTRICT 5—Richard H. O'Donnell, Clay Center
DISTRICT 8—Jay L. Richardson, Arkansas City
DISTRICT 9—Kermit G. Wedel, Minneapolis
DISTRICT 11—Ivan E. Rhodes, Wichita
DISTRICT 17—F. Calvin Bigler, Garden City

A formal invitation was extended by Saline County Medical Society to the Kansas Medical Society to hold its 117th Annual Meeting in Salina.

John W. Travis, M.D., the newly installed President, delivered a brief address, after which the House of Delegates adjourned at 12:20 PM.

RESOLUTION NO. 75-1

Paramedical Personnel

Not adopted.

RESOLUTION NO. 75-2

Kansas Division, American Trauma Society

WHEREAS, The American Trauma Society has emerged as a recognized national philanthropic organization dedicated to involve under medical guidance the lay public and lay leaders in a program of fund-raising, education, and continuing involvement that will tend to supplement, support, and abet existing trauma programs and encourage the development of needed but underdeveloped programs; and

WHEREAS, The national medical organizations such as the American College of Surgeons and the American Academy of Orthopedics have endorsed this organization; therefore be it

Resolved, That the Kansas Medical Society endorse the development of a Kansas Division of the American Trauma Society.

RESOLUTION NO. 75-3

Neurology

Not adopted. Referred to the Council for study.

RESOLUTION NO. 75-4

Mu'tiphasic Screening

WHEREAS, Matters of medical health profile screening programs are of prime importance and concern to the patients and physicians of Kansas; and

WHEREAS, The American Medical Association has adopted guidelines for establishing and operating multiphasic health testing programs (see statement on multiphasic health testing—AMA); therefore be it

Resolved, That:

1. The Kansas Medical Society endorses the AMA guidelines regarding multiphasic health testing;

2. The Kansas Medical Society urges the Kansas Legislature to establish by-law guidelines regarding multiphasic health testing programs using the AMA guidelines;

3. The Kansas Medical Society requests that the Kansas Legislature require all multiphasic health testing programs to register with the Kansas Department of Health and Environment;

4. No multiphasic testing program be instituted in any area in Kansas without local medical society approval.

Addendum to Resolution No. 75-4

(Paragraph (f) from the AMA Council on Medical Service, Report C, adopted by the AMA House of Delegates, December 1971.)

f. GUIDELINES FOR ESTABLISHING AND OPERATING MULTIPHASIC HEALTH TESTING PROGRAMS

The following guidelines are recommended for use by physicians and medical societies in providing technical advice and assistance in the planning, development, implementation, and operation of multiphasic health testing programs:

1. Multiphasic health testing is a method of acquiring, storing, collating, and reproducing medical data on individual patients. The testing procedures are considered to be incomplete health services. Provisions must be made for a physician to interpret and evaluate this medical data base as an aid in continuing patient care.

2. The multiphasic testing program should meet ap-

plicable licensing requirements and be appropriately evaluated for quality control.

3. Physicians must be involved in the planning and development of testing programs.

4. The operation of all MHT programs must be supervised by qualified physicians at the testing center, particularly in regard to any abnormal findings, and these physicians must see that the patient is instructed to obtain medical advice for significant abnormal findings.

5. The system should be designed to make maximum use of allied health professionals and should utilize technical and automated techniques where justified.

6. For professional value and economic feasibility, the program should include tests that are simple, safe, easy to interpret, inexpensive and quick to perform, and that have acceptable sensitivity, specificity, high predictive value, and patient acceptance.

7. The testing system should include the following criteria: reliability, accuracy of output, saving of time of physicians and allied health personnel, adequate utilization, and sufficient flexibility for customization to physician and patient needs. The program should establish individual ethnic, geographic, and other variations of normal and abnormal patterns.

8. The program should provide for confidentiality of patient data.

9. The testing program should be used, where feasible, to meet otherwise unmet community health needs and should be integrated into the continuing health care system.

10. The testing program should be designed to meet various objectives such as diagnostic services, health maintenance, and guidance in management of ongoing illness including chronic disease.

11. Evaluation methodology should be built into the program to determine the acceptance and use, yield, false positives, and false negatives, as well as the long-term effects of the program on illness and the need and demand for health services. The program should include a documented accounting system, at least for internal use, and a reasonable cost finding system, that would allow for cost analysis and cost summaries.

12. The program should maintain freedom of choice for both the physician and the patient.

RESOLUTION NO. 75-5

Sterilization Regulations

WHEREAS, A regulation has been instituted outlining restrictions applicable to sterilization procedures under Title XIX which is an interference in the proper care of patients; and

WHEREAS, This regulation is discriminating to the person on public assistance and permissive to the affluent member of society, thus having doubtful constitutionality; and

WHEREAS, Medically, the delay of elective postpartum tubal ligation to 72 hours demonstrably increases postoperative morbidity and extends hospitalization; therefore be it

Resolved, That:

1. The Kansas Medical Society communicate to the Department of HEW the objections to the regulation on sterilization;

2. A copy of this resolution be forwarded to the House of Delegates of the AMA for consideration and appropriate action;

3. A copy of this resolution be forwarded to the Kansas Congressional delegation.

RESOLUTION NO. 75-6

Collective Bargaining

Not adopted. Referred to the Commission on Sociology and Economics for study.

RESOLUTION NO. 75-7

Roster

WHEREAS, Resolution No. F73-6 rescinded Resolution No. 73-20, and provided for a committee to study the practicality of adding to the roster such evidence as would indicate the clinical competence of the member physicians; and

WHEREAS, After study by the committee there appears to be no practical way to provide additional information on the clinical competency of member physicians without adding considerably to the expense of compilation and publication by both the Kansas Medical Society and its component societies; therefore be it

Resolved, That the Kansas Medical Society membership directory continue its present format.

RESOLUTION NO. 75-8

Presidential Succession

Resolved, That this house approves the Intent of Resolution No. 75-8 and the resolution be referred to

the Committee on Constitution and By-Laws to draft an amendment to the By-Laws, as necessary, to include whatever changes need be made in the By-Laws as they now stand, and to present these amendments at the fall meeting of the House of Delegates for final action.

Intent of Resolution No. 75-8

WHEREAS, The Constitution and By-Laws do not provide for presidential succession in the event of the death or permanent inability to perform the duties of his office by the President of the Kansas Medical Society; and

WHEREAS, The President-Elect, by virtue of his preparation to assume the office of the President, is the best qualified to resume the office upon the above listed circumstances; therefore be it

Resolved, That Section 7.2 of the By-Laws be amended by adding after the final sentences—"The President-Elect shall assume the presidency in the event of the death of the President or the inability of the President to perform the duties of the office. In the event of such succession to office, the President-Elect shall not be disqualified from serving his term as President for which he was duly elected."

RESOLUTION NO. 75-9

Implementation of Postgraduate Education Requirement

WHEREAS, One intent of Resolution No. 74F-1 (Postgraduate Education) was to comply with the AMA Physicians Recognition Award; and

WHEREAS, The Kansas Medical Society postgraduate education requirements are not in compliance with the AMA Physician Recognition Award requirements as follows:

A. Accredited hours, Category I: KMS—50 hours, AMA—60 hours.
B. Non-accredited hours:
   1. KMS—Category II, 100 hours unrestricted.
   2. AMA—Categories II-VI, 90 hours restricted;
      a. Category II—Continuing Medical Education activities with non-accredited sponsorship (45 credit-hour limit),
      b. Category III—Medical Teaching (45 credit-hour limit),
      c. Category IV—Papers, Publications, Books, and Exhibits, (40 credit-hour limit)
      d. Category V—Non-supervised Individual Continuing Medical Education Activities, (45 credit-hour limit with a 22 credit-hour limit per subcategory):
         1. independent study
         2. consultation
         3. patient care review
         4. self-assessment
         5. specialty board preparation
      e. Category VI—Other Meritorious Learning Experiences (45 credit-hour limit);

and

WHEREAS, The cost of implementation of this postgraduate education requirement can be minimal if equated to the AMA Physicians Recognition Award, but otherwise would be at considerable expense to the Kansas Medical Society and its members; and

WHEREAS, The Kansas Medical Society Postgraduate Education Committee (Continuing Medical Education Committee) now has accrediting authority for Category I continuing medical education credit; therefore be it

Resolved, That Sections 1(a) and 2(a) of Resolution No. 74F-1 be changed to comply with the AMA Physician's Recognition Award requirements as they now stand; and be it further

Resolved, That the Kansas Medical Society Postgraduate Education requirements become effective July 1, 1975; and be it further

Resolved, That KMS members as of July 1, 1975, have until June 30, 1978, to complete their requirements; and be it further

Resolved, That new KMS members will have three (3) years to comply with the above requirements, commencing the first July 1st following their becoming members of the KMS; and be it further

Resolved, That any other medical specialty organization whose postgraduate education program is accepted for the AMA Physicians Recognition Award shall meet the requirements for membership in the Kansas Medical Society; and be it further

Resolved, That compliance with these requirements shall be as follows:

1. Receipt of the AMA Physicians Recognition Award; or

2. Membership in good standing in any medical specialty organization whose postgraduate education program equates with the AMA Physicians Recognition Award.

RESOLUTION NO. 75-10

Joint Advisory Committee on Outreach

WHEREAS, Both KMS and KUMC are interested in improving the proportion of KUMC graduates who stay in Kansas; and

WHEREAS, Both KMS and KUMC desire to improve the distribution of physicians in Kansas in order to better serve the population of the state; and

WHEREAS, Outreach programs of medical education involve both the practicing physicians of the state and the medical faculty; and

WHEREAS, Outreach education involves both undergraduate and internship residency training; and

WHEREAS, The perceived objectives and advantages of such outreach programs vary among interested parties in the KMS, the KUMC, and the student body; and

WHEREAS, Communication among said parties is desirable to help all parties appreciate the objectives and philosophies of the other parties; and

WHEREAS, Common understanding can promote a better definition of objectives and better implementation of all outreach programs; therefore be it

Resolved, That the Kansas Medical Society favor and take appropriate steps to lead to the formation of a joint *advisory* committee to be composed of interested persons from the Kansas Medical Society, the University of Kansas Medical Center, the Wichita Branch of KUMC, and (if possible) the student bodies (both undergraduate and graduate) to discuss philosophies, possibilities and mechanisms of conducting "outreach" education of undergraduate students and of interns and residents; and be it further

Resolved, That such committee will have advisory powers but no executive powers.

RESOLUTION NO. 75-11

Relative Value Scale

Not adopted.

RESOLUTION NO. 75-12

Relative Value Designations

Not adopted. Referred to the Commission on Medical Practices and Specialty Societies for study.

RESOLUTION NO. 75-13

Smoking

WHEREAS, The report of the Surgeon General of the United States shows that smoking has adverse effects on health; and

WHEREAS, The American Medical Association has pointed out the adverse effects; and

WHEREAS, The annoyance to nonsmokers is extremely offensive; therefore be it

Resolved, That the House of Delegates of the Kansas Medical Society request its members and visitors to refrain from all smoking in the assembly hall while the House of Delegates is in session.

RESOLUTION NO. 75-14

Smoking

Not adopted.

RESOLUTION NO. 75-15

Utilization Review

WHEREAS, There are many hospitals in the state of Kansas having less than 100 beds and serving rural Kansas populations; and

WHEREAS, Many of these hospitals have active medical staff of seven or less; and

WHEREAS, Small hospitals and medical staffs cannot comply with the utilization review law, and therefore the loss of these hospital beds is a realistic possibility under the existing laws covering utilization review as contained in Part B of Title XI of the Social Security Act: (2) the provisions of subsection (f) (4) of section 506, the last section of 1861 (k), and subsection (g), (h), and (i) (4) of section 1903 of the Social Security Act, and (3) the regulations on utilization review procedures for hospital and nursing facilities (as a condition of participation in the medicare program) and on utilization of care and services (under the medicaid program), as applied by the Secretary of HEW on November 29, 1974; therefore be it

Resolved, That this House of Delegates goes on record as favoring exemption of the above small (less than 100 beds) hospitals and/or their small staffs (less than 8) from the above noted statutes or rulings for a period of eighteen months to allow for further study and evaluation of alternative utilization review methods for these facilities by the Secretary of HEW; and be it further

Resolved, That a copy of this resolution and its implied support of S-843 in the 94th Congress be immediately transmitted to the Governor of Kansas, the Kansas State Department of Health and Environment, the Kansas Congressional Delegation in Washington, and the Secretary of HEW.

RESOLUTION NO. 75-16

National Legislation

WHEREAS, There is an increasing amount of federal legislation concerning medical care; and

WHEREAS, The Kansas Medical Society needs to be continuously informed regarding this legislation; and

WHEREAS, The Kansas Medical Society desires to have input to Kansas Congressmen regarding such legislation; therefore be it

Resolved, That the desire of the Kansas Medical Society for a mechanism to be better informed regarding national legislation and to have input to Kansas Congressmen be conveyed to the Executive Committee for appropriate action.

RESOLUTION NO. 75-17

KaMPAC

Resolved, That the Kansas Medical Society reiterate its support of KaMPAC.

RESOLUTION NO. 75-18

Professional Liability

WHEREAS, The scope, complexity, and severity of the professional liability problem requires a more comprehensive and detailed study; therefore be it

Resolved, That the By-Laws be amended to establish a Commission on Professional Liability and Medico-Legal Affairs.

RESOLUTION NO. 75-19

Woman's Auxiliary

WHEREAS, This year marks the fiftieth anniversary of the founding of the Woman's Auxiliary to the Kansas Medical Society; and

WHEREAS, This period of time has been marked by innumerable instances of varied, selfless, and faithful service to the Kansas Medical Society and to the citizens and communities of Kansas; and

WHEREAS, Members of the Woman's Auxiliary have also provided leadership at several levels and various capacities to the Woman's Auxiliary to the American Medical Association; therefore be it

Resolved, That the House of Delegates of the Kansas Medical Society here assembled extend its congratulations and best wishes to its Woman's Auxiliary on the occasion of the celebration of its Golden Anniversary, its thanks for fifty years of faithful service to the doctors and people of Kansas, and its hopes for continued blessings for the future; and be it further

Resolved, That a copy of this resolution be presented by the President of the Kansas Medical Society or his designee to the general meeting of the Woman's Auxiliary on May 6, 1975, and that this be entered upon their records.

RESOLUTION NO. 75-20

Professional Utilization Review

WHEREAS, Resolution No. 70-5 specified the mechanism to be used in conducting Professional Utilization Review and Review of Unusual Charges; and

WHEREAS, The Kansas Medical Society Councilor of each Council District has had the responsibility for setting up a local peer review committee; therefore be it

Resolved, That the Kansas Medical Society Executive Committee shall have the responsibility of appointing a chairman for a local peer review committee in a Council District when the Councilor in that district indicates that he does not wish to appoint said chairman; and be it further

Resolved, That Resolution No. 70-5 be amended to reflect the above change; and be it further

Resolved, That Resolution No. 70-5, as amended, continue to serve as the mechanism to be used in conducting Professional Utilization Review and Review of Unusual Charges.

RESOLUTION NO. 75-21

RVS

Not adopted.

RESOLUTION NO. 75-22

Kansas Foundation for Medical Care

Not adopted.

RESOLUTION NO. 75-23

Annual Physical Examinations for Sports Participation

Not adopted. Referred to the School Health Committee for study.

RESOLUTION NO. 75-24

Oliver E. Ebel

Resolved, That Oliver E. Ebel be made an honorary, lifetime member of the Kansas Medical Society, and a lifetime honorary member of the House of Delegates of the Kansas Medical Society, and that the President of KMS have a suitably inscribed plaque or diploma presented to him.

RESOLUTION NO. 75-25

Federal Regulations

WHEREAS, Implementation of the regulations published in the *Federal Register* pertaining to 24-hour review of institutionalized patients will interfere with the doctor-patient relationship; and

WHEREAS, These same regulations will remove admission decisions (made by the admitting physician) and place it in the hands of the hospital board of trustees (through their utilization review committees); and

WHEREAS, Various estimates range from $4 to $15 per admission for implementation, which costs must be passed on to our patients, and

WHEREAS, The decisions for admission, plan of treatment, length of stay, and post-institutional care will be rigidly standardized for our patients; and

WHEREAS, Implementation of the regulations have been delayed by HEW and may not become law; and

WHEREAS, There has been no clear definition of the liability of the admitting physician in the case of denial; and

WHEREAS, Our patients are not informed that decisions pertaining to their admission, plan of treatment, length of stay, and disposition are being made by other than their own physician; therefore be it

Resolved, That the Kansas Medical Society support the position of the AMA in their suit against HEW; and be it further

Resolved, That the Kansas Medical Society be opposed to implementation of any part of these 24-hour admission regulations, even on a trial basis; and be it further

Resolved, That the Kansas Medical Society support quality of care which is the basis of review activity under the Kansas Foundation for Medical Care, and the Kansas Medical Society objects to a shift in emphasis toward primary fiscal considerations; and be it further

Resolved, That the local medical societies should take steps to prevent unnecessary hardship to our patients because of the ill considered enforcement of these regulations.

RESOLUTION NO. 75-26

Comprehensive Malpractice

WHEREAS, Medical malpractice is the most serious problem confronting physicians of Kansas today; and

WHEREAS, A rapidly developing sequence of events has threatened virtual extinction of the availability of conventional professional liability insurance; and

WHEREAS, In spite of the diligent efforts of the officers, administrative personnel, and the Malpractice committee of the Kansas Medical Society, the Kansas Legislature has failed to recognize the malpractice crisis and pass remedial legislation; and

WHEREAS, Ultimate passage of such legislation will hinge on successful development of comprehensive public support through a major public education program; therefore be it

Resolved, That the Kansas Medical Society and the Commission on Professional Liability and Medico-Legal Affairs commit itself to the task of preparation and presentation to Kansas Legislature a comprehensive medical injury compensation bill creating sweeping changes in all phases of malpractice legislation; and be it further

Resolved, That without adequate financial support by the Kansas Medical Society further commitment by the Commission on Professional Liability and Medico-Legal Affairs toward such an achievement would be fruitless; and be it further

Resolved, That a Malpractice Study and Development Fund be created and funded by a special mandatory Kansas Medical Society membership assessment not to exceed $50 per full-dues-paying members during the year 1975 only; and be it further

Resolved, That dispersement from the fund be mutually administered through the Commission on Professional Liability and Medico-Legal Affairs, with approval of any one of the following official groups: Executive Committee, Council, or House of Delegates of the Kansas Medical Society; and be it further

Resolved, That the physicians of Kansas personally

support the objectives outlined in Par. 5 of this resolution prior to or at the time of the 1976 Kansas legislative session.

RESOLUTION NO. 75-27

Health Service Areas for Kansas

WHEREAS, The Governor of Kansas, The Honorable Robert F. Bennett, in a letter to the Honorable Caspar Weinberger, Secretary of HEW, under the date of May 1, 1975, indicated that there should be three health service areas in Kansas; and

WHEREAS, Governor Bennett indicated that three Kansas counties (Leavenworth, Wyandotte and Johnson) should be included in a Kansas City Metropolitan HSA; and

WHEREAS, This action would involve 20 per cent of the practicing physicians in Kansas, 20-25 per cent of the population, and a substantial majority of physicians in training; and

WHEREAS, The medical societies of Leavenworth and Wyandotte counties have expressed their opposition to this designation; and

WHEREAS, Kansas geographic boundaries have been used to establish a statewide PSRO district and a statewide Regional Medical Program which this law replaces; and

WHEREAS, Such action would violate the very sovereignty of the State of Kansas; therefore be it

Resolved, That the Kansas Medical Society go on record in opposition to the inclusion of Leavenworth, Wyandotte and Johnson counties in a Kansas City Area HSA even with equal representation; and be it further

Resolved, That copies of this resolution, along with our expressed disappointment in Governor Bennett's recommendation, be sent to The Honorable Caspar Weinberger, Governor Robert Bennett, Governor Christopher Bond of Missouri, and to all of the Senators and Representatives from Kansas.

RESOLUTION NO. 75-28

CPT Codes in Government Health Programs

Resolved, That the Kansas Medical Society requests the fiscal intermediaries for federal health insurance programs in Kansas to seek permission of BHI/SSA to use the AMA CPT five-digit codes as assigned in the 1974 KRVS.

RESOLUTION NO. 75-29

Johnson County Medical Society

WHEREAS, The Johnson County Medical Society has worked diligently to provide comfortable and convenient facilities for the 116th Annual Session of the House of Delegates of the Kansas Medical Society; and

WHEREAS, It has organized and presented a scientific program that was realistic, practical and timely; and

WHEREAS, They have been most generous and gracious hosts; therefore be it

Resolved, That the KMS House of Delegates here assembled express its thanks to the Johnson County Medical Society for its hosting of the Annual Session of the Kansas Medical Society May 4-7, 1975; and be it further

Resolved, That a copy of this resolution be transmitted to the Johnson County Medical Society and be spread upon its records.

RESOLUTION NO. 75-30

Oliver E. Ebel

WHEREAS, Mr. Oliver E. Ebel has nobly served The Kansas Medical Society as its Executive Director for 31 years; and

WHEREAS, he has given unstintingly of his time and efforts for the doctors and citizens of Kansas through the accomplishment of the purposes and ideals of The Kansas Medical Society as stated in its Constitution and By-Laws and its resolutions passed by the House of Delegates; and

WHEREAS, his efforts in the Kansas Legislature have served to provide the legislators with the medical information and the medical viewpoint necessary to write and pass legislation that affected the health and welfare of the people of Kansas; therefore be it

Resolved, That this House of Delegates here assembled, in behalf of the membership of The Kansas Medical Society, express its thanks to Mr. Oliver E. Ebel for his dedication, his devotion, and his loyalty as its Executive Director; and be it further

Resolved, That the House of Delegates looks forward to his continued involvement on its behalf as a Consultant to the Kansas Medical Society.

Kansas Foundation for Medical Care

The By-Laws of the Kansas Foundation for Medical Care were amended by the Corporate Body on Wednesday, May 7, 1975. The Articles and Sections are reproduced below as amended.

ARTICLE I

Membership

1. *Classes of Membership*

There shall be only one class of membership in this corporation. They shall be known as Corporate members, and shall have the right to vote on any question submitted for vote by the members.

Any Doctor of Medicine or Doctor of Osteopathy who is authorized by the statutes of the State of Kansas to practice medicine and surgery in the State of Kansas shall be eligible to apply for membership as a Corporate member. Any Doctor of Medicine or Doctor of Osteopathy who has previously applied for and been accepted as a Participating member shall hereafter be a Corporate member until his membership shall be terminated as provided in the By-Laws.

2. *Selection and Removal of Members*

Any physician who desires to become a Corporate member of this corporation shall complete and file such application for that purpose as may be required by the Board of Directors. Such application shall contain a provision whereby the applicant agrees to be bound by the By-Laws of the corporation and such rules and regulations as may be adopted by the corporation and agrees to be bound by the principles of medical ethics, as interpreted by the American Medical Association and the Kansas Medical Society.

Any Corporate member whose license to practice medicine and surgery has been suspenced or revoked shall be automatically suspended or terminated as a Corporate member.

The Board of Directors shall be authorized to adopt such rules and regulations as it may deem reasonable for the processing of applications for Corporate Membership.

3. *Rights, Privileges and Obligations of Members*

Membership is continuously open to any Doctor of Medicine or Doctor of Osteopathy who is licensed to practice medicine and surgery in the State of Kansas and who is engaged in active practice in the State of Kansas.

Membership is voluntary, and the physician need not be a member in, or pay dues to, any other organization as a requirement of membership.

A member may voluntarily elect to terminate membership at any time by serving written notice to the Secretary of the corporation.

Non-payment of voluntary contributions shall not be a cause for suspension or termination of membership, nor for non-assignment to perform the duties and functions of the corporation.

4. *Voting Rights*

The right to vote shall be held by Corporate members. Cumulative voting and voting by proxy shall not be permitted. Corporate members shall have the right to vote on the adoption of any health care standards used for peer review or any uniform, average, or median fee schedules for medical services by the Foundation. Adoption of such schedules shall be by a majority of those members present and voting.

ARTICLE II

Meetings of the Corporate Members

2. *Special Meetings*

A special meeting of the Corporate members of this corporation may be called at any time by the President, the Board of Directors, or by not less than fifty (50) such Corporate members.

6. *Quorum*

Fifty (50) Corporate members shall constitute a quorum at any such meeting. If a quorum is not present at the meeting, a majority of the Corporate members present may adjourn the meeting from time to time without further notice.

ARTICLE III

Board of Directors

1. *General Powers*

The affairs of this corporation shall be managed by its Board of Directors and such Board members shall be elected by the membership at large at the annual meeting.

2. *Number, Tenure, and Qualifications*

The number of directors shall be thirty-one (31), including the President and Immediate Past-President of

the Kansas Medical Society, and the Immediate Past-President of the corporation as ex-officio members, and the President of the corporation, who shall serve ex-officio with the right to vote. Initially, districts 1 through 6 will each nominate one director for a period of three (3) years; districts 7 through 12 will each nominate one director for a period of two (2) years; districts 13 through 18 will each nominate one director for a period of one (1) year. Thereafter, each district will nominate a director for a period of three (3) years as their terms expire. The Kansas State Osteopathic Association shall nominate three (3) of their members licensed to practice medicine and surgery to serve on the Board of Directors. Initially, one shall be nominated to serve a three-year term, one to serve a two-year term, and one to serve a one-year term. The Board of Directors shall nominate six (6) members at large; initially two for one (1) year, two for two (2) years, and two for three (3) years, thereafter successors shall be nominated for a term of three (3) years.

8. *Vacancies*

Any vacancy occurring in the Board of Directors shall be filled by appointment from the original nominating body of that director. A director appointed to fill a vacancy shall be appointed for the unexpired term of his predecessor in office subject to the approval of the Board of Directors and election by the Corporate Body at its next annual meeting.

ARTICLE IV

Officers

1. *Officers*

The officers of the corporation shall be a President, a Vice-President, a Secretary and a Treasurer, elected by the Board of Directors from the current membership of the Board.

One or more Project Directors may be appointed in accordance with the provisions of this Article.

The Board of Directors may elect or appoint such other officers, including one or more Assistant Secretaries and one or more Assistant Treasurers, as it shall deem desirable, such officers to have the authority and perform the duties prescribed from time to time by the Board of Directors.

9. *Executive Director*

The Executive Director and any Executive Assistants shall be selected, employed and supervised by the Board of Directors, which shall determine the terms of their employment.

ARTICLE V

Committees

2. *Other Committees*

Other committees not having and exercising the authority of the Board of Directors in the management of the corporation may be appointed in any such manner as may be designated by a resolution adopted by a majority of the Directors present at a meeting at which a quorum is present. Unless otherwise provided in such resolution, members of such committees may be persons who are not members of the Board of Directors and the Chairman of each committee shall be a member of the Board of Directors.

Report of the President, Kansas Foundation for Medical Care —Francis T. Collins, M.D.

As instructed by the House of Delegates in their fall session of 1974, the KFMC has submitted an application for designation as the Conditional PSRO for Kansas.

In the meantime, however, HEW has put out rules and regulations, through the current fiscal intermediaries of federal programs, to all hospitals and nursing homes relative to peer review and utilization review for federally funded programs.

This has caused a great deal of confusion. Currently, the fiscal intermediary is charged with the responsibility of carrying out these rules. None of the non-funded PSROs are involved as yet, and the AMA has filed suit for an injunction to delay implementation of these rules. This is still in the courts, and the case will be heard on May 27. In addition, the Health Planning and Resources Development Act of 1974 is now law, having been signed by the President in January. The implications of planning, building hospital additions, equipment, fees for providers, and other areas are many. The confusion in Washington as to the control of this act is great, and we cannot fathom the implications of this act since the rules and regulations are still being written. The service areas referred to in the act add to the confusion because, although I hear through the grapevine that the areas have been defined, they have not been finally acted upon by HEW. Federal, state government, RMP, CHP, the fiscal intermediary, emergency medical service, and social welfare departments are all

involved and vying for input and control. Physicians and consumers are a very small minority, when involved at all. The KFMC is not involved, for we are in limbo and have only planning status until designated and funded by HEW. Our funding was for a six-months planning grant, which expired December 24, 1974. We have no other source of funding until we become designated the PSRO for Kansas.

HEW is having severe funding problems with the PSRO program. Their budget submitted for Fiscal Year 1974 was $59 million for the PSRO program. The appropriation was for $37 million. There are 203 PSRO areas designated in the USA, 14 have attained conditional status and are fully active. Another 20 are partially active. These 34 are funded for their function. There are another 90 areas that have submitted plans for performing PSRO, but are not funded. We are one of the 90. We submitted our plan on February 14, 1975, with the assurance that we would hear of definitive action within two weeks. To this date, we have not heard directly about our plan. Since that time, we have filled out many forms and surveys relative to the location of Title XVIII and XIX recipients, doctors, specialities, trade areas, hospital census figures, and surveys soliciting hospitals for willingness to cooperate in PSRO, and have revised our plans for utilization review under Dr. Ben Matassarin, of Wichita, and for peer review under the chairmanship of Dr. Ed Ryan, of Emporia, according to the designated districts that we have set up in Kansas. We have met with the fiscal intermediary, which is Blue Cross-Blue Shield of Kansas, and welfare, and have worked on agreements of how we will all work together. In building this program, we have worked with the following organizations: Blue Cross-Blue Shield of Kansas, who is the fiscal intermediary for Title XVIII and the fiscal agent for Title XIX; the Kansas Clearinghouse Agency; the State Department of Social and Rehabilitative Services; Comprehensive Health Planning; Kansas Regional Medical Program; the Kansas Department of Health and Environment; the University of Kansas Medical Center; the Kansas Medical Society; the Kansas State Osteopathic Association; component medical societies; the Kansas Hospital Association; local hospitals; local foundations for medical care; local medical staffs, various specialty societies; AMA; and various non-physician health care organizations. On the federal side, we work with the Public Health Service; Health Services Administration; the Bureau of Quality Assurance; the Bureau of Health Insurance; the Office of Professional Standards Review; the Social Security Administration; the Social and Rehabilitative Services; the Internal Revenue Service; the American Association of Foundations for Medical Care; and the American Association of Professional Standards Review Organizations.

We have screens from the American Society of Internal Medicine; AMA; Wisconsin, Michigan, and Utah; and all of the 16 specialty societies of the KMS are working on modifications of screens and guidelines for Kansas. We have contacted, and have been contacted by, many allied health services who wish to be involved in PSRO. We have changed our By-Laws to accommodate the requirements of HEW without jeopardizing our Kansas program. These By-Law changes are in your packet. They will be discussed tomorrow at Reference Committee B, and will be voted on by the Corporate Body on Wednesday. They have been approved by a joint meeting of the KMS-KFMC Executive Committees and by the Board of Directors of the KFMC.

I have touched on National Health Insurance (NHI) in the past. It is impossible to predict what this plan will be. Eventually, the several plans will meld and one will be passed. The cost and ramifications of any NHI plan will be enormous. The strain on providers of health care will be great. It will be a difficult time for us all, and we all will be fighting for our right of self-determination and to maintain the concept of private enterprise as opposed to dictatorial governmental decrees. The whole concept of PSRO, in an organized and dogmatic approach, such as we have, in contrast to the peer review and utilization review we have known throughout our professional lives, is causing many changes in the delivery and receipt of health care. When Congress declared health care as a right, rather than as an opportunity, all facets of government foresaw the implications and wanted to be included for their own personal gain. This now involves the Social Security Administration, HEW, public assistance, social services, welfare, nursing, pharmacy, welfare rights organizations, civil rights unions, educational programs, medical programs, osteopathic, dental, chiropractic, acupuncture, psychology, medical assistants, physician's assistants, technicians, and many others. The whole concept is that of patient care, as opposed to medical care alone. This may not be all bad, for the good physician should treat the person as a whole individual, not as a single disease. However, the increased amount of scientific data, the increased demand for services, the removal of much of the financial barrier to health care, and the unreasonable public expectations have, and will continue, to result in the depersonalization of care, which is detrimental to quality

care as we know it. The issue of public accountability will have a profound effect on the development of goals of quality care at a reasonable cost.

In the last analysis, goals and their achievement will be dependent on the "Keystone of Human Behavior—Motivation." In the ultimate, it will be individual motivation which will be largely responsible for progress—or the lack of it. An interesting comparison is that of the achievement levels of behavior motivated by compulsory threat, with that of those motivated by volition. We can all make those comparisons. Though health care has been designated as a right, each person must assume the responsibility for his health by the life style he chooses.

To conclude, I would like to quote from a paper written by Dr. Thomas N. Elmendorf, the Immediate Past-President of the California Medical Association, which I feel is a goal we as professionals must all try to achieve, and I quote: "It is in the public interest for physicians to live up to their responsibilities as true professionals, and for government to use its power wisely. Reasoned restraint on the part of both will overcome far more impediments to mutual goals than continued polarization which would be counterproductive and obstructive."

I would now like to report that the KFMC Board of Directors met this morning and elected officers for the coming year. The Nominating Committee was composed of Dr. Alex Mitchell of Lawrence, Chairman; Drs. Dean Collins, of Topeka, and Louis Culp, of Kansas City. I would now like to read a portion of their report which was presented at our Board meeting this morning:

> It was pointed out that the KFMC is now, and will be for the next six-eight months, in a very important period of its existence. The KFMC is in the latter part of its planning state and has recently submitted a plan to HEW for designation as a Conditional PSRO. The committee agreed that the present officers have done a commendable job in guiding the KFMC in its efforts to become the Conditional PSRO for Kansas. The committee further agreed that it might possibly hinder the efforts of the KFMC if the officers were to be changed at the present time because of the time factor involved in familiarizing new officers with the work done to the present date. In view of this information, the committee nominates the following:
>
> Francis T. Collins, M.D., Topeka, for President
> Kenneth L. Graham, M.D., Leavenworth, for Vice-President
> L. William Halling, M.D., Hays, for Secretary
> Chester M. Lessenden, M.D., Topeka, for Treasurer.

The Nominating Committee report was accepted, and the physicians nominated were reelected by a unanimous vote.

This concludes my report. I thank you for the opportunity to speak before you.

Editorial Comment

(Continued from page 140)

attention to those peculiar elements of ability and communication which are codominants in the practice of medicine. Until the profession can bring effective control over the former and understand that the latter is as much a primary therapeutic tool as the hand, the knife or the pill, it will continue to operate in an adversary role in continuing contention with multiple effects rather than the primary roots. Even such control and understanding will be no guarantee of immunity against legal responsibility but the risk should approach an irreducible minimum—at least within the capacity of the profession to accomplish it. Furthermore, they are essential preparation for any of the negotiatory plans which appear to be the direction of the future.—*D.E.G.*

KaMPAC

WANTED: ***Interested, Energetic, and Politically Minded Individuals to Serve on the Board of Directors of KaMPAC.***

According to the By-Laws, the members of the Board of Directors and Alternate Directors shall be appointed by the Executive Committee of the Kansas Medical Society subject to approval of the Council of the Kansas Medical Society, for a term of one (1) year.

If you are interested in such a position, please write to: The Kansas Medical Society, 1300 Topeka Blvd., Topeka 66612.

Vox Dox

Dear Vox Dox:

Again this year, I am compiling a Biting Insect Summary and would appreciate any case reports of unusual reactions to biting insects, *i.e.*, mosquitoes, fleas, gnats, kissing bugs, bedbugs, chiggers, black flies, horseflies, sandflies, deerflies, etc.

I would like physicians to supply me with case reports of those patients who have had unusual reactions to such insects. Include in your reports the type of reactions and complications, if any, the age, sex, and race of the patient, the site of the bite(s), the season of the year, the immediate symptoms, the skin test results, desensitization results, if any, and any associated other allergies. Send this information to the following address:

CLAUDE A. FRAZIER, M.D.
4-C Doctors Park
Asheville, N. C. 28801

Letters to VOX DOX should be addressed to the Vox Dox Editor. Journal of the Kansas Medical Society, 1300 Topeka Avenue. Topeka, Kansas 66612.

Sports Medicine

(Continued from page 135)

temperature and minimize dehydration. Although most competitors consume fluids during races that exceed 1-1.5 hours, current international distance running rules prohibit the administration of fluids until the runner has completed 10 miles (16 kilometers). Under such limitations, the competitor is certain to accumulate a large body water deficit (–3%) before any fluids would be ingested. To make the problem more complex, most runners are unable to judge the volume of fluids they consume during competition. At the 1968 U. S. Olympic Marathon Trial, it was observed that there were body weight losses of 6.1 kg, with an average total fluid ingestion of only 0.14 to 0.35 liters. It seems obvious that the rules and habits which prohibit fluid administration during distance running preclude any benefits which might be gained from this practice.

Runners who attempt to consume large volumes of a sugar solution during competition complain of gastric discomfort (fullness) and an inability to consume fluids after the first few feedings. Generally speaking, most runners drink solutions containing 5-20 gm of sugar per 100 ml of water. Although saline is rapidly emptied from the stomach (25 ml min), the addition of even small amounts of sugar can drastically impair the rate of gastric emptying. During exercise in the heat, carbohydrate supplementation is of secondary importance and the sugar content of the oral feedings should be minimized.

MANUSCRIPTS SOLICITED

The American Academy of Orthopaedic Surgeons is pleased to announce that manuscripts are earnestly solicited for the three Kappa Delta Awards of $2,000 each. Three awards will be given, providing manuscripts of requisite quality are submitted for outstanding contributions in the field of orthopaedic surgery from United States citizens, resident in the States or its Possessions. Awards will be made in the following three categories:

1. Basic research that relates to the musculoskeletal system.
2. Clinical research in orthopaedic surgery.
3. Problems related to trauma of the musculoskeletal system.

You are urged to submit any work which you have done which is eligible. The Committee on Research Awards of the Academy will also appreciate your bringing this information to the attention of anyone who may be engaged in a subject that would qualify. If at all feasible, at least one of these three awards will be given to a younger investigator (aged 40 or younger).

Papers to receive the awards will be selected during the current year from manuscripts presented to the Committee on Research Awards of the American Academy of Orthopaedic Surgeons before August 1, 1975. Appropriate places will be reserved on the 1976 program for the presentation of the award-winning papers.

Please submit six copies of abstracts or manuscripts to:

American Academy of Orthopaedic Surgeons
Advisory Committee on Research; Kappa Delta Awards
430 North Michigan Avenue
Chicago, Illinois 60611

THE KANSAS FOUNDATION FOR MEDICAL CARE INC. 1972

Bits 'n' Pieces

Bit by bit, we are progressing in our efforts to piece together a program which will comply with Public Law 92-603—PSRO.

Here are some progress notes:

In Case You Didn't Know, the KFMC submitted a Conditional PSRO plan on February 14, 1975. This plan, if acceptable to HEW, will allow the KFMC to become the Conditional PSRO for the state of Kansas. At this writing, we have not received any comments from HEW relative to the acceptability of our plan.

During the interim, the KFMC has been functioning, and is continuing to function, on extensions of our Planning Contract. Due to the federal funding problems that all PSROs are facing, the next phase that most PSROs will go through will be an Interim Contract phase.

The Interim Contract phase will be a post-Planning, pre-Conditional phase. During this period of time (up to six months), the KFMC will institute the PSRO program into a small number of selected hospitals.

For a full report of our progress, please read the President's Report by Francis T. Collins, M.D. The report is reproduced in full in this issue of the JOURNAL, under the proceedings of the first session of the Kansas Medical Society House of Delegates.

In Case You Haven't Heard, a three-judge Federal District Court recently upheld the Professional Standards Review Organization system created under the Social Security Amendments of 1972. In a 36-page opinion, the court rejected the contentions raised by the Association of American Physicians and Surgeons, that PSRO deprived physicians of their right to practice, interfered with the physician-patient relationship, and invaded the privacy of potential patients.

So—it looks like PSRO may be here to stay.

In Case You Don't Care, you probably haven't read this article.

In Case You Do Care, write our office. We'll tell you how to get involved.—*J.E.A.*



Pro-Banthine®
brand of
propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.
Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 481

"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action—Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action—Pro-Banthine helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action—Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action—Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

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(propantheline bromide)

a good option in peptic ulcer

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Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

makes sense in edema.*

Neither inconvenient, unpalatable, expensive potassium supplements nor special K^+ rich diets are needed as a rule. Just 'Dyazide' once or twice daily for control of edema. Serum K^+ and BUN should be checked periodically (see Warnings section).



Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

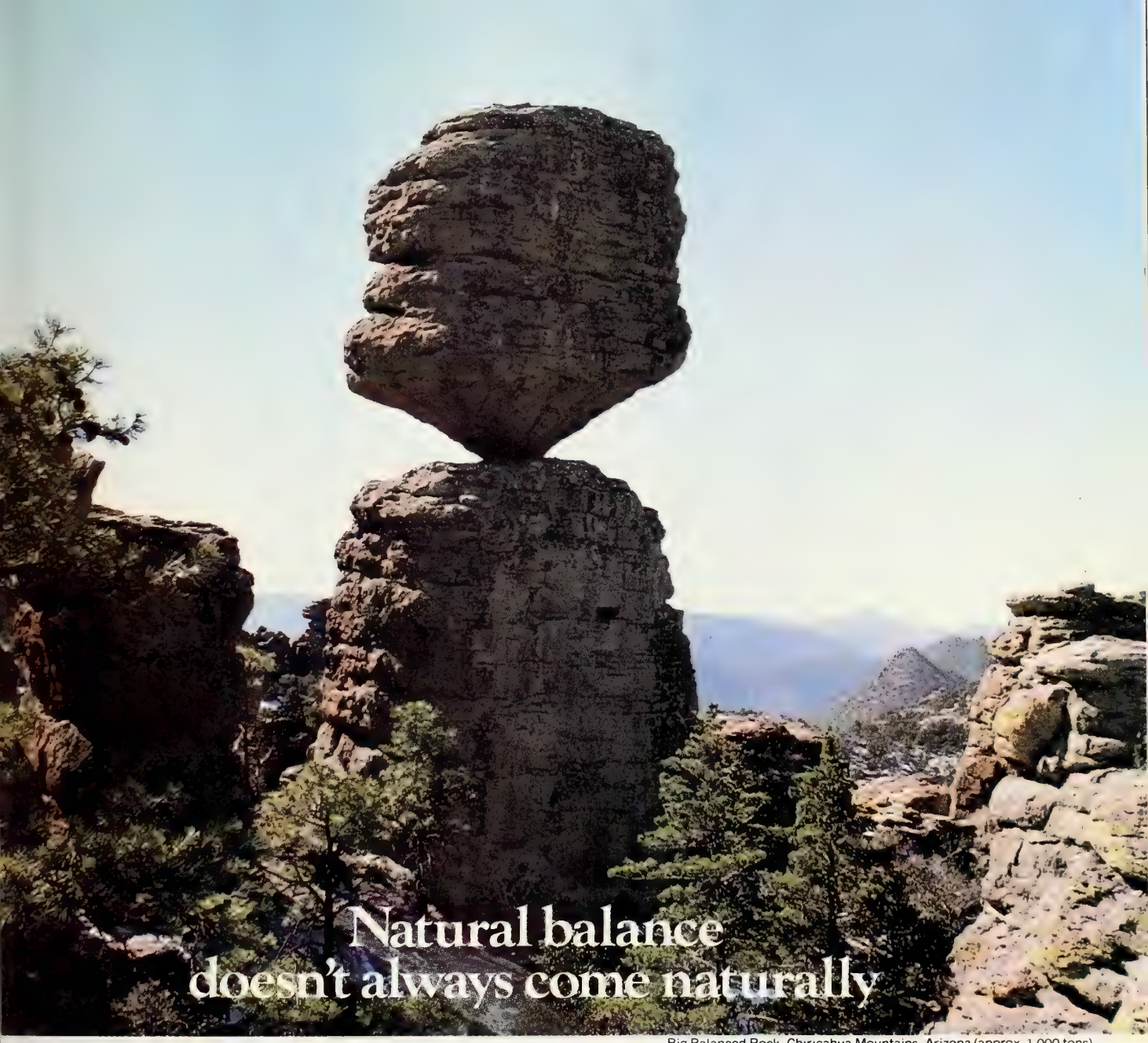
Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

'Dyazide' gets excess water and salt out and helps keep essential potassium in.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

- Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
- Can relieve nausea and vomiting often associated with vertigo.*
- Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
- Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
- Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

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As a rule, only pain that requires morphine is beyond the scope of Empirin® Compound with Codeine No. 4. That's because it delivers a full grain of codeine. (In the preferred phosphate form.) Its antitussive action is particularly appreciated by patients with fractured ribs, and following chest or abdominal surgery. Its low addiction liability is a bonus for all patients who require potent analgesia.

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Wherever it hurts

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No. 3, codeine phosphate*(32.4 mg) gr ½ · No. 4, codeine phosphate*(64.8 mg) gr 1

*Warning—may be habit-forming.

Each tablet also contains aspirin gr 3½, phenacetin gr 2½, caffeine gr ½

Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritating symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimulation. Your patients will appreciate the 24-hour relief they can get from just one tablet every 12 hours.

Cold or Allergy?



Whether it's a cold or an allergy, Dimetapp Extentabs® effectively relieve stuffiness, drip and congestion.

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.
CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.
WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.
PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.
ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.
HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

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when pain goes on... and on... and on–



For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.

Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides ¼ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

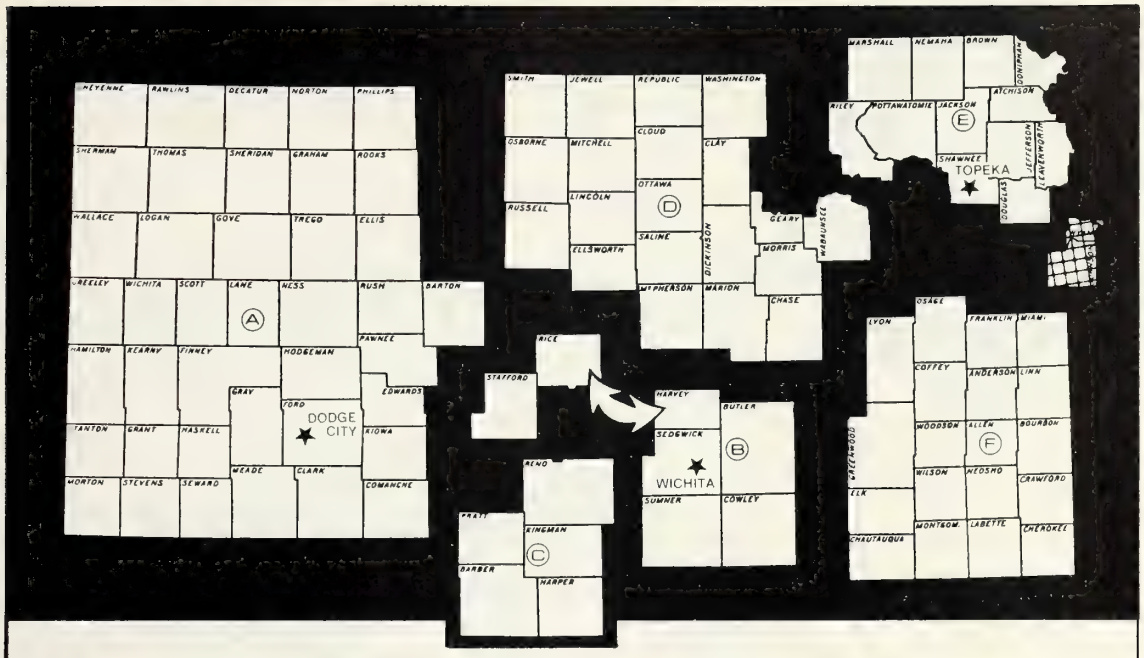
Phenaphen with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming)

Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature

(III) Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

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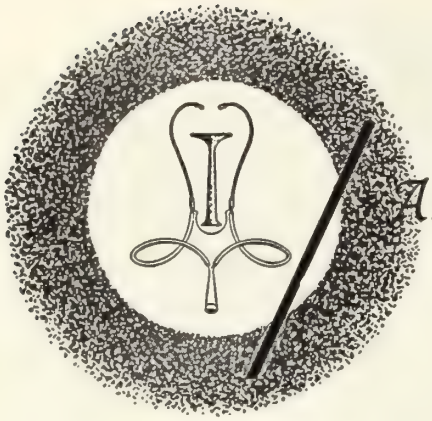
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Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the* DOCTOR'S CALENDAR. *Notice of the session is posted in advance to allow the physician time to make preparations.

JUNE

June 23-26 — American Orthopedic Association, Homestead, Hot Springs, Va. INFO: R. E. King, M.D., Suite 545, 340 Blvd. N.E., Atlanta 30312.

JULY

July 14-17 — ACP Postgraduate: "Topics in Clinical Hematology," Waterville, Maine. INFO: Registrar, ACP, 4200 Pine, Philadelphia 19104.

July 16-19 — ACP Postgraduate: "Breast Carcinoma," Waterville, Maine. INFO: Registrar, ACP, 4200 Pine, Philadelphia 19104.

July 27-Aug. 1 — American Medical Tennis Association, Seattle. INFO: PO Box 183, Alton, IL 62002.

AUGUST

Aug. 11-15 — Aspen Mushroom Conference, Hotel Jerome, Aspen. INFO: 330 S. Wabash Ct., Denver 80231.

SEPTEMBER

Sept. 7-12 — Flying Physicians Association, Lake Geneva, Wisc. INFO: Albert Carriere, 801 Green Bay Rd., Lake Bluff, IL 60044.

Sept. 12-14 — Mid-Continent Psychiatric Association, Alameda, Kansas City, Mo. INFO: J. L. Chapel, U. of Missouri Medical Center, Columbia 65201.

Sept. 18-20 — Colorado Medical Society, Broadmoor, Colorado Springs. INFO: D. G. Perry, 1601 E. 19th, Denver 80218.

Sept. 19-26 — American Society of Clinical Pathologists and College of American Pathologists, Conrad Hilton Hotel, Chicago. INFO: P. E. Raleigh, 2100 W. Harrison, Chicago, Chicago 60612.

Sept. 20-25 — American Association of Ophthalmology, Sheraton-Dallas, Dallas. INFO: L. A. Zupan, 1100 17th St., N.W., Washington 20036.

Sept. 26-28 — Central Association of Obstetricians and Gynecologists, Broadmoor, Colorado Springs. INFO: C. P. Goplerud, M.D., University of Iowa Hospitals, Iowa City 62242.

University of Colorado:

June 30 — *Pathology in Ob-Gyn*

July 6-10 — *Ophthalmology*

July 14-18 — *Internal Medicine*

July 27-30 — *Pediatrics*

July 31 — *Dermatology*

Aug. 4-8 — *Gastroenterology*

Aug. 13-16 — *Office and Sports Orthopedics*

Aug. 18-21 — *Gynecology*

For further information, write the Office of Postgraduate Medical Education, U. of Colorado School of Medicine, 4200 E. 9th, Denver 80220.

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The post-T & A patient:

another type for TYLENOL® acetaminophen products



When the post-T & A patient requires an analgesic, a new problem arises. Hemorrhagic tendencies following the use of aspirin after tonsillectomies have been reported.[1,2] In a patient who "...has recently undergone a surgical procedure or has another underlying hemostatic defect, aspirin ingestion may cause significant bleeding....Aspirin is absolutely contraindicated in such situations. Acetaminophen...could replace aspirin in these instances."[3]

The post-T & A patient is only one of several 'types for TYLENOL' antipyretic-analgesic products—that is, patients who should avoid aspirin. Considering *all* of them, wouldn't it provide added safety (as well as added convenience) to recommend TYLENOL products routinely for simple analgesia?

References: 1. Reuter, S.H., and Montgomery, W.W.: Arch. Otolaryng. *80*:214-217 (Aug.) 1964. **2.** Osol, A., et al., ed.: The United States Dispensatory and Physicians' Pharmacology, ed. 26, Philadelphia, J.B. Lippincott Co., 1967, p. 171. **3.** Schwartz, A.D., and Pearson, H.A.: J. Pediat. *78*:558-560 (March) 1971.

Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. Acetaminophen has rarely been found to produce any side effects.

Elixir, 120 mg./5cc. (alcohol 7%).
Drops, 60 mg./0.6cc. (alcohol 7%).
Chewable Tablets, 120 mg.

Safer than aspirin, yet just as effective for relief of pain and fever

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ABFP EXAMINATIONS

The American Board of Family Practice will give its next two-day written certification examination on November 1-2, 1975. It will be held at five centers geographically distributed throughout the United States. Information regarding the examination may be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary
American Board of Family Practice, Inc.
University of Kentucky Medical Center
Annex #2, Room 229
Lexington, Kentucky 40506

Please Note: It is necessary for each physician desiring to take the examination to file a completed application with the Board office. Deadline for receipt of applications in this office is June 15, 1975.

Ovarian Tumors

(Continued from page 134)

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8. Fawcett, D. W.: *The Cell—Its Organelles and Inclusions.* Philadelphia, W. B. Saunders Co., 1966, pp. 244-256.
9. Odland, G. F. and Reed, T. H.: Epidermis. A. S. Zelickson (ed.), *Ultrastructure of Normal and Abnormal Skin.* Philadelphia, Lea and Febiger, 1967, pp. 54-75.
10. Rhodin, J. A. G.: *An Atlas of Ultrastructure.* Philadelphia, W. B. Saunders Co., 1963, pp. 132-133.

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Information for Authors

Manuscript Preparation

Manuscripts must be typewritten, double spaced, leaving wide margins. Submit the original, plus one copy if possible.

Titles should be short, specific, and amenable to indexing. A subtitle is frequently used to keep the main title short.

Summary: All manuscripts should include a short abstract which is a factual (not descriptive) summary of the work.

Author Responsibility: The author is responsible for all statements made in his work, including changes made by the copy editor. Manuscripts are received with the explicit understanding that they are not simultaneously under consideration by any other publication. Publication elsewhere will be subsequently authorized at the discretion of the Editor.

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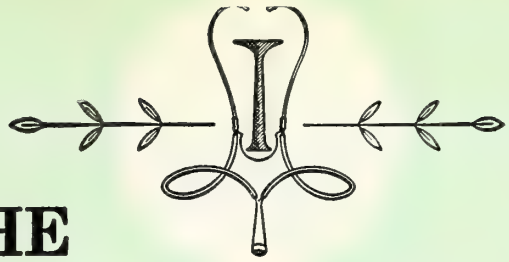
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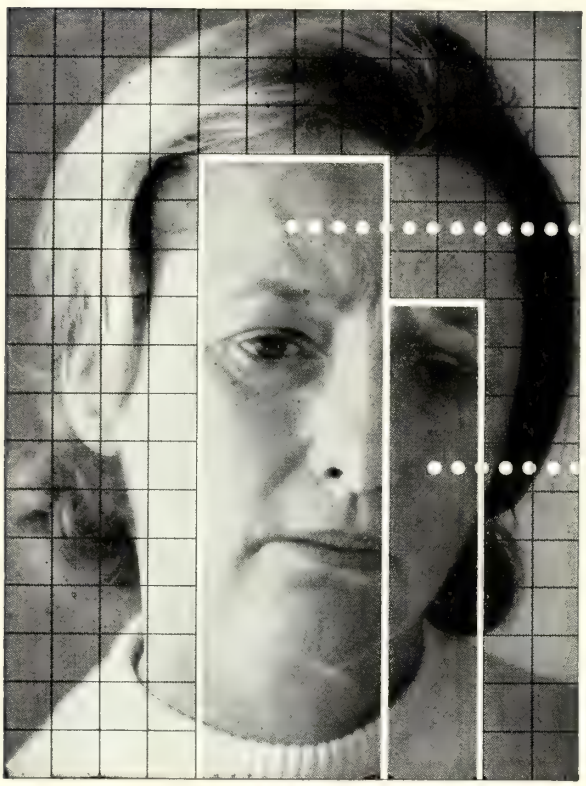


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JULY
1975

VOL. LXXVI
NO. VII

Both often



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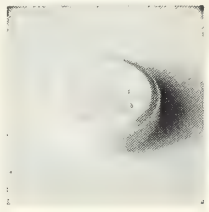
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Volume LXXVI, Number 7—July, 1975

The JOURNAL of the KANSAS MEDICAL SOCIETY

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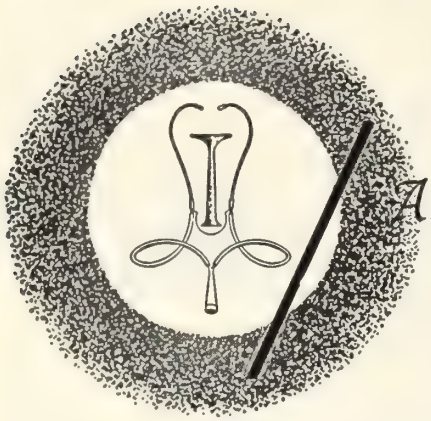
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Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the **Doctor's Calendar.** ***Notice of the session is posted in advance to allow the physician time to make preparations.***

JULY

July 14-17 — ACP Postgraduate: "Topics in Clinical Hematology," Waterville, Maine. INFO: Registrar, ACP, 4200 Pine, Philadelphia 19104.

July 16-19 — ACP Postgraduate: "Breast Carcinoma," Waterville, Maine. INFO: Registrar, ACP, 4200 Pine, Philadelphia 19104.

July 27-Aug. 1 — American Medical Tennis Association, Seattle. INFO: PO Box 183, Alton, IL 62002.

AUGUST

Aug. 11-15 — Aspen Mushroom Conference, Hotel Jerome, Aspen. INFO: 330 S. Wabash Ct., Denver 80231.

SEPTEMBER

Sept. 7-12 — Flying Physicians Association, Lake Geneva, Wisc. INFO: Albert Carriere, 801 Green Bay Rd., Lake Bluff, IL 60044.

Sept. 12-14 — Mid-Continent Psychiatric Association, Alameda, Kansas City, Mo. INFO: J. L. Chapel, U. of Missouri Medical Center, Columbia 65201.

Sept. 18-20 — Colorado Medical Society, Broadmoor, Colorado Springs. INFO: D. G. Perry, 1601 E. 19th, Denver 80218.

Sept. 19-26 — American Society of Clinical Pathologists and College of American Pathologists, Conrad Hilton Hotel, Chicago. INFO: P. E. Raleigh, 2100 W. Harrison, Chicago, Chicago 60612.

Sept. 20-25 — American Association of Ophthalmology, Sheraton-Dallas, Dallas. INFO: L. A. Zupan, 1100 17th St., N.W., Washington 20036.

Sept. 26-27 — Kansas Heart Association 26th Annual Meeting, Broadview Hotel, Wichita. INFO: KHA, 5229 West 7th St., Topeka 66606.

Sept. 26-28 — Central Association of Obstetricians and Gynecologists, Broadmoor, Colorado Springs. INFO: C. P. Goplerud, M.D., University of Iowa Hospitals, Iowa City 62242.

University of Colorado:

July 14-18 — *Internal Medicine*

July 27-30 — *Pediatrics*

July 31 — *Dermatology*

Aug. 4-8 — *Gastroenterology*

Aug. 13-16 — *Office and Sports Orthopedics*

Aug. 18-21 — *Gynecology*

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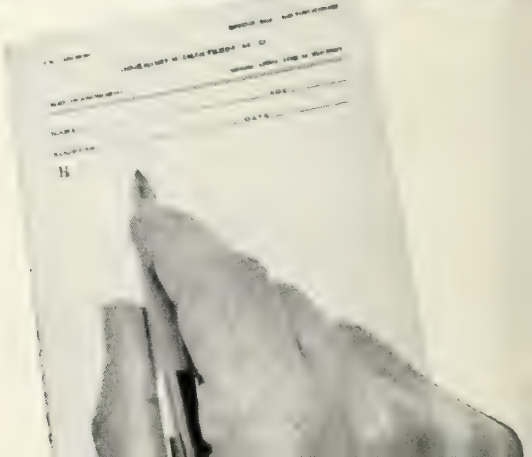
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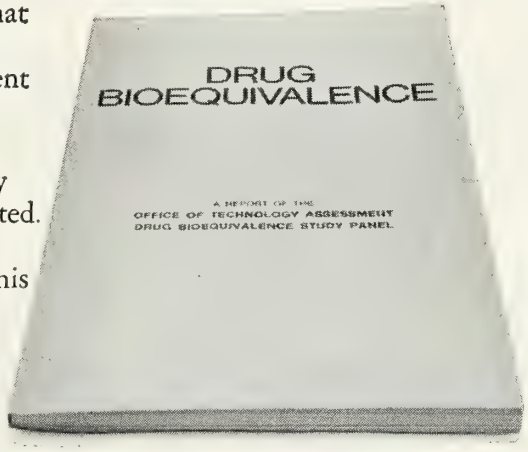
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

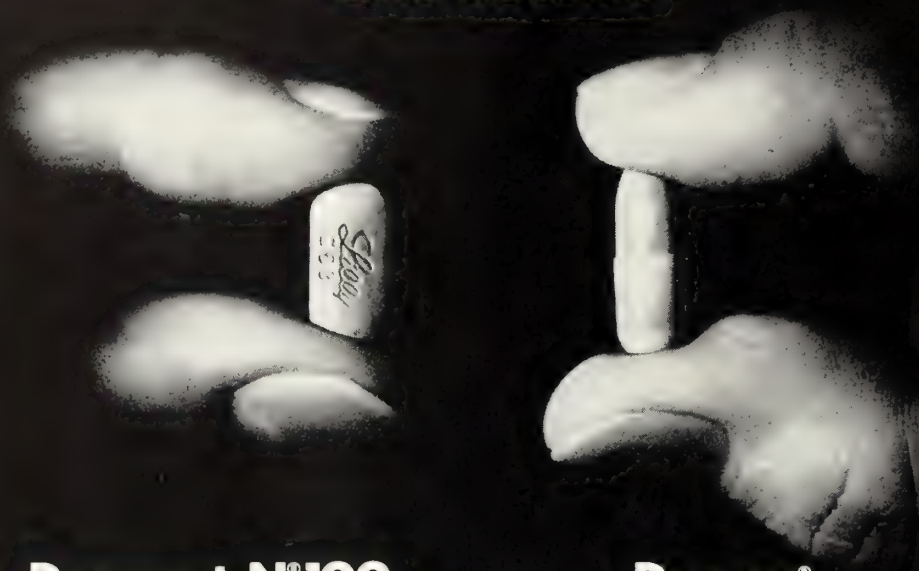
The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

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*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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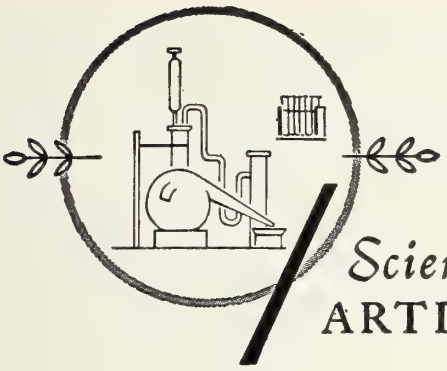
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Amniotic Fluid Analysis

Studies for Fetal Maturity

JOSEPH LEIKER, M.D.,* ***Wichita, and***
PAUL A. HENSLEIGH, M.D., Ph.D.,** ***Kansas City, Kansas***

THE ORIGIN and significance of amniotic fluid has for many years excited physiological interest, but knowledge of practical use to the clinician has had only limited application. Interest in the formation and function of amniotic fluid in humans dates back to Hippocrates, who suggested that it was formed from fetal urine, possibly because of its color, odor, and other similar properties.[1] More recently, however, detailed investigation of the constituents of amniotic fluid has yielded information of practical value. It has been shown that this fluid not only cushions the fetus against trauma and provides a medium in which it can more easily develop in an even environmental temperature, but it is also the repository for fetal secretions and excretions.

Sanctions against penetrating the uterus for amniotic sampling vanished after the work of Bevis[2] in 1952, which demonstrated the prognostic significance of bilirubin pigment in amniotic fluid of Rh-sensitized mothers. The 1950s and 1960s witnessed an increasing interest in maternal and fetal influences upon the amniotic contents in Rh-sensitized pregnancies. The easy accessibility and relatively small risk of amniocentesis led to a multidisciplinary approach and then to a new area of medicine: perinatology. The subsequent widespread use of transabdominal amniocentesis in clinical practice established the safety of the procedure; and serial sampling from mid-pregnancy onward in cases of Rh isoimmunization provided the opportunity to measure other constituents of liquid at different stages of gestation.

Since prematurity and the respiratory complications associated with it are the single most common cause of perinatal mortality, and since termination of pregnancy before term, prior to onset of labor, is frequently accepted as the solution to certain complications of pregnancy, it is well to focus our attention on constituents of the amniotic fluid which may be used to prognosticate fetal maturity. Maternal isoimmunization, diabetes, toxemia, infections, postmaturity, premature rupture of membranes, and placental insufficiency are considered foremost among the conditions in which early termination of pregnancy may be indicated.

One of the more reliable means of determining gestational age is to have established the last menses soon after it occurred and to examine the pelvic organs in the first trimester. Both the history and physical examination become less reliable in establishing gestational age as the pregnancy progresses and, unfortunately, patients commonly do not present themselves for examination until later in pregnancy. Modalities available to establish fetal maturity in the last trimester include x-ray visualization of ossification centers, sonographic determination of the head size, and an analysis of amniotic fluid. Since ossification centers may be influenced by such diverse factors as fetal sex, race and nutrition, and since sonography requires expensive equipment and experienced operators, attention has been directed toward analysis of fetal excretion and secretion products in the fetal urine.

* Wesley Medical Center, Wichita 67214.
** Department of Gynecology and Obstetrics, KUMC, Kansas City 66103.
Address reprint requests to: Paul A. Hensleigh, M.D., 39th & Rainbow, Kansas City, Kansas 66103.

Procedure

The procedure for obtaining amniotic fluid is a relatively simple one which can be performed on outpatients with proper precautions of aseptic technique, positioning of the mother after voiding, and localization of the fetus. Although complications from amniocentesis are infrequent, certain complications do occur. The risks to the mother and fetus are the classic triad of medicine: trauma, hemorrhage, and infection. In the mother, trauma might be to the bladder, gut, the vascular structures in the uterine or to the abdominal wall, which are due to varicosities or fibroids. Most difficulty is encountered when there has been previous extensive abdominal or pelvic surgery or previous extensive pelvic infection. A rare but very serious complication and obstetric risk is that of intraamniotic infection. Premature labor may be induced by the procedure. Placental perforation may result in hemorrhage from the fetal circulation into the maternal circulation, and may lead to fetal anemia or increased sensitization in Rh-negative mothers.

Fetal trauma from penetration of the fetal parts may occur, and could be serious. Fetal pneumothorax and cord hematomas have been reported. In order to minimize the risk of placental or fetal trauma, most commonly, the amniocentesis is performed in the suprapubic area after displacing the head upward. Sonography may also be used to localize the placenta. If a bloody sample is obtained, the fetus must be carefully monitored to alert the physician of fetal compromise. Differential staining of a maternal peripheral smear following a bloody tap may identify fetal cells and would be an indication for treatment of the Rh negative mother with prophylactic $Rh_0(D)$ immune globulin. Since it is not always possible to identify small fetal-maternal leaks, some authors have recommended routine treatment of Rh negative mothers with $Rh_0(D)$ immune globulin following an amniocentesis, provided they are not already sensitized at that time. Even though this is done, differential staining would be useful to identify massive fetal-maternal leaks requiring a larger dose of immune globulin.

Errors in determination of amniotic fluid constituents may be induced by blood, meconium, other particulate matter, or prolonged exposure to light. Specimens should be shielded from light to prevent the breakdown of bilirubinoid and other pigments. Also, to reduce errors, one should stain cells and centrifuge immediately for removal of blood and other particulate matter.

Optical Density

Since the publications of Bevis,[2] regarding the utilization of the optical density at 450 mu as a reflection of bilirubin pigments, there has been much interest in the amount of bilirubin pigment in amniotic fluid in normal pregnancies, as well as those affected by isoimmunization. Although its source is not known, bilirubin is found in amniotic fluid in normal pregnancies as early as the 12th week, and reaches relatively high concentrations between 16-30 weeks gestation.[3] The increase in absorbance at 450 mu is largely due to unconjugated bilirubin plus whatever heme pigment or pigments are present. Attention has been paid to conditions affecting fetal swallowing and absorption of amniotic fluid, because it is felt that the fetus removes protein and, perhaps, bilirubin from this swallowed fluid. Fetal conditions with increased values of bilirubin are anencephaly, intestinal obstruction and, occasionally, deteriorating hydropic fetuses.[4] Diabetes has also recently been shown to give elevated values of bilirubin.[5]

The technique described by Liley is to report the optical density difference (ΔOD) at 450 mu. The 450 mu ΔOD is a rough but consistently reproducible index of bilirubin concentration in amniotic fluid. Many investigators have demonstrated a progressive decrease in ΔOD during normal pregnancy. Jools and Jones[6] have shown in their series that the disappearance of the peak (0.000 reading) without a subsequent rise was a fairly constant finding after the 36th week. Between the 34-36th weeks the reading was usually 0.010 or higher, whereas before the 34th week the reading in most cases was greater than 0.025. This data corresponds closely with that of Mandelbaum, La Croix, and Robinson,[7] Cherry,[8] and others. Andrews,[9] in his series, showed that 16 per cent of pregnancies had optical deviations (ΔOD greater than 0.000) beyond 36 weeks gestation. Cherry found 10 per cent to be the case. This is one of the major disadvantages in using the ΔOD at 450 mu as an indicator of fetal maturity. The work of many investigators, however, indicates that once the optical density falls to 0.000, fetal maturity is almost assured.

Creatinine

Woyton,[10] in 1963, was the first to note a progressive rise in amniotic creatinine values as the fetus approaches term. Increasing fetal micturition, increasing fetal kidney maturity, increasing fetal muscle mass, and decreasing amniotic fluid volume as pregnancy progresses are the current explanations for the sharp increase in amniotic fluid creatinine that begins at about the 36th week of gestation. In 1967, Pitkin and Zwirek[11] confirmed the earlier observations and in addition showed that creatinine concentration increases exponentially as term approaches, with an acceleration beginning at the 34th to 36th week. In a recent article, Jools and Jones[6] suggest the following guides formu-

lated for use in construction of a fetal maturity profile: (1) If the amniotic fluid creatinine level is greater than 2.0 mg/100 ml, then the fetal age is 37 weeks or more, in 95 per cent of patients; (2) If the creatinine is 1.5 mg/100 ml or greater, it is associated with a fetal age of 34 weeks or more, in 97 per cent of cases; (3) If the creatinine is less than 1.0 mg/100 ml, then the fetal age is less than 30 weeks, in 79 per cent of the cases. Throughout the study, a correlation between maternal serum creatinine and liquor creatinine was noted in cases in which both were performed concurrently. Many investigators believe that the total volume of amniotic fluid and maternal serum creatinine should be known if the amniotic creatinine values are to have any prognostic significance in complicated pregnancies.

Cytology

Little attention was paid to amniotic fluid cytology as an index of fetal maturity until 1965, when Brosens and Gordon[12] published their results correlating fetal age with the percentage of amniotic fluid cells staining orange with Nile blue sulphate. Cells staining in this way are assumed to arise from the fetal sebaceous glands which gradually become functional with increasing fetal age. The method commonly used correlates the percentage of orange stained cells in each sample to gestational age. According to Jools and Jones,[6] the orange staining cells at less than 30 weeks are nil, from 30-34 weeks they are less than 1 per cent, from 34-38 weeks they amount to 1-10 per cent, from 38-40 weeks they amount to 10-50 per cent, and over 40 weeks the orange staining cells are more than 50 per cent. Moreover, in all patients with a pregnancy of 38 weeks or more, the cell count was greater than 10 per cent. Andrews[9] found a cytological count of 10 per cent orange cells indicates a pregnancy of 36 weeks gestation within 95 per cent confidence limits. Others have used 20 per cent orange cells as a critical level of maturity. A particular advantage of this test is that no special facilities or equipment are required and it can be done as an office procedure.

Phospholipids

The concentration of phospholipids in amniotic fluid has rapidly gained in popularity as a method for assessing the maturity of the fetus in utero. Clements[13] noted in 1957, that the lungs contain a surface tension-reducing substance termed "surfactant," which is a complex of lipid, carbohydrate, and protein. The major lipid portion consists of the phospholipid, phosphotidyl choline, or lecithin. The choline portion is hydrophilic, while the fatty acid portion is hydrophobic. This unique property allows lecithin to reduce surface tension. It is now known that surfactant is produced by Type II alveolar cells and resides in inclusion bodies in these cells.[14] It is secreted into the alveolar space, and by its surface-active properties it provides stability to the inflated lung.

In 1967, Brumley and associates[15] studied the lungs from infants dying of hyaline membrane disease (HMD), as well as lungs from infants dying of other causes. The lungs from infants with HMD demonstrated high surface tension and a low content of phospholipid. Platzker and co-workers[16] demonstrated an increasing amount of lung phospholipid content with increasing gestational age. Since many investigators had previously demonstrated that the amniotic fluid was in communication with the respiratory tract, and that indeed the respiratory secretions contributed to its content, it seemed reasonable to expect that as the lung tissue matured and the phospholipid concentration increased this would be reflected in the alveolar secretion and in turn in the amniotic fluid. Accordingly, measurements of the amniotic fluid phospholipid content might be predictive of fetal lung maturity.

In 1969, Nelson[17] published data showing that lecithin represented more than 65 per cent of the phospholipid content of normal-term amniotic fluid, and that amniotic fluid lecithin was low in three instances where the infant developed respiratory distress or HMD. Then in 1971, Gluck[18] and others demonstrated that, whereas lecithin levels sharply increased as one approached term gestation, the sphingomyelin concentration decreased. In order to simplify the procedure, the lecithin to sphingomyelin ratio (L/S ratio) is now being used rather than quantitative determination of lecithin. Blood contamination of the fluid falsely elevates the L/S ratio, whereas meconium contamination falsely lowers the ratio. Samples must also be processed within a short time or frozen until analyzed.

Recently, Harding and others[19] demonstrated a significant rise in both lecithin concentration and the L/S ratio, which began at 34 weeks and plateaued at 38 weeks. No infant developed RDS when associated with an amniotic fluid L/S ratio of greater than 2.0. Low amniotic fluid ratios of less than 2.0 predict a significant neonatal risk for respiratory distress or mortality. However, approximately 10 per cent of apparently mature fetuses demonstrate an "immature" L/S ratio immediately prior to birth. The need to investigate more fully this group of fetuses which does not declare its maturity by the typical rise in L/S ratio is apparent.

It has also been shown that the L/S ratio and creatinine concentration have very close correlation in the prediction of fetal maturity, and the prognostic significance may be increased when the two are used together.

Bubble Stability Test (Shake Test)

In 1972, Clements[20] described a simple, quick, and inexpensive test for the antenatal prediction of fetal lung maturity. The test is based on the ability of pulmonary surfactant in amniotic fluid to form stable films which can support the structure of foam for relatively long periods. Other substances are excluded from the surface films by the non-foaming competitive surfactant, ethanol. One advantage in this is that the test is very quick and easy to perform. Varying ratios of amniotic fluid are mixed with ethanol in test tubes, shaken for 15 seconds, and allowed to stand for 15 minutes. Persistence of bubbles in the more diluted amniotic fluid samples allows an interpretation of "positive" for surfactant.

According to Bhagwanani and others,[21] there is a definite relation between the stage of gestation and results of the test. In general, the earlier the gestation the greater the proportion of negative results. The study suggests that a positive bubble stability test may be of great value, for it practically excludes the possibility of fetal lung immaturity and HMD. However, only one of 37 cases with a positive result was less than 37 weeks. The main clinical problem in deciding on prematurity lies with cases which range between 32 and 37 weeks. It is here that the shake test is disappointing. None of the cases during this period were positive. Of 19 cases, 14 were negative and 5 intermediate. Yet in 13 of 19 cases respiration was perfectly normal. One must be aware of this high incidence of false negative results when applying the test; only a positive result is of predictive value.

Other Studies

A number of fetal tests are of value in evaluating the well-being of the fetoplacental unit, but are not accurate in determining gestational age. Among these are maternal urinary estriol excretion, maternal serum heat stable alkaline phosphatase, oxytocinase, diamine oxidase, and chorionic somatomammotropin. Although each of these tend to increase as pregnancy progresses, the range of normal is large and, therefore, absolute levels in a particular sample are not helpful in establishing gestational age.

Conclusion

Gestational age is best established clinically in the first trimester by taking a menstrual history and examining the uterus. In late pregnancy, x-rays of the fetus are of limited value; sonographic measurement of the fetal head is considerably more accurate. The most practical tests available at the present time involve analysis of amniotic fluid for bilirubin pigments, fetal sebaceous cells, creatinine, and lecithin. Since the respiratory distress is the most common cause of perinatal mortality and results from a lack of surfactant material (particularly lecithin), this particular test is the most crucial of all in determining the safety of a premature induction of labor.

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Nitrofurantoin

Pulmonary Reaction

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DRUG-INDUCED pulmonary disease has become a well known phenomenon. There are various histological and clinical patterns of lung disease induced by drugs, including diffuse pulmonary disease, mediastinal and hilar changes, pleural effusion, pulmonary calcification, bronchoconstriction, and respiratory muscle paralysis. Since 1962, nitrofurantoin has been recognized as another drug which induces pulmonary disease. The following are two cases representing nitrofurantoin-induced lung disease.

Case One

A 64-year-old white manager of a brick producing firm developed conjunctivitis, sinusitis, and a urinary tract infection in May 1973. His family physician treated the conjunctivitis and a regimen of nitrofurantoin for his urinary tract infection was prescribed. On August 12, 1973, the patient developed a dry, non-productive cough, a low grade fever, and dyspnea. He was given tetracycline for 15 days, without relief of symptoms. On August 23, 1973, a chest x-ray showed increased markings in both lung bases which were not present in January 1973.

The patient gave no history of smoking, but stated that he had been intermittently exposed to shale dust for ten years. After becoming the manager, this exposure had been reduced sharply. He gave no history of sputum production, hemoptysis, weight loss, or travel to endemic areas of fungal disease. Other than a hospitalization for pneumonia some ten years ago, his past history for pulmonary disease was negative. His brother had chronic obstructive pulmonary disease, but there was no further significant family history. Other than the respiratory symptoms described above, the review of systems was non-contributory.

On physical examination, the patient appeared dyspneic and had a severe, persistent, dry, non-productive cough. A 2 cm thyroid nodule was palpated on right side. There were fine, scattered basilar rales in both lung bases. A grade I/VI systolic murmur was auscultated, best at the apex. The rectal examination revealed an enlarged prostate, 1+/4+. The remaining results of physical examination were normal.

Routine laboratory tests on admission showed pyuria, with 15-20 white blood cells (WBC). The complete blood count (CBC) was essentially normal: hemoglobin, 14.2 gm/100 ml; hematocrit reading, 42%; WBC, 8,200 cu mm. Two of three sputum cultures grew Torulopsis, otherwise the cultures were negative for routine bacteria, fungus, acid fast bacillus, and cytology. Arterial blood gases on admission were: pH 7.43, pCO2 36, pO2 74. A chest x-ray was negative. There was no evidence of pulmonary embolus on the lung scan. A thyroid scan showed diffuse enlargement without clear-cut focal lesions. T3 and T4 were both within normal limits. A treadmill EKG was negative for myocardial ischemia, but positive for exercise-induced premature ventricular contractions. The five-hour glucose tolerance test showed a mild diabetic pattern with the one-hour glucose of 204, two-hour glucose of 184, and 1+ glucosuria at two and three hours.

Two case histories of pulmonary reactions to nitrofurantoin are presented; a discussion of history, modes of presentation, pathogenesis, and treatment is included.

The patient was treated with intermediate positive pressure breathing (IPPB), ultrasonic nebulizer, marax, an expectorant, and diabetic diet. He was discharged on September 1, 1973, with a diagnosis of subacute bronchitis, thyroid adenoma, and mild diabetes mellitus.

On October 1, 1973, the patient was readmitted because of progressive dyspnea with inability to walk more than 100 feet before becoming short of breath. His cough was worse, but still non-productive. His low grade temperature, 99-100F (37.2C-37.8.C), persisted without chills or night sweats. He had been treated almost continuously with nitrofurantoin since May 1, 1973, because of a persistent urinary tract infection.

Physical examination at this time revealed the patient to be much more dyspneic with a respiratory rate of 28.

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The thyroid nodule was again noted and the fine, crepitant rales in both bases persisted. No heart murmur was noted on this hospitalization. A barium enema revealed a 4 x 5 cm polyp in the mid-sigmoid flexure, which was resected and found to be a benign adenomatous polyp. Lung biopsy showed a non-specific, organizing pneumonitis consistent with nitrofurantoin lung.

The nitrofurantoin therapy was discontinued, and the patient was treated with prednisone 60 mg/day. The dosage was gradually reduced until mid-January, when the steroid therapy was discontinued. The patient was now asymptomatic and his chest x-ray in April showed no abnormalities.

Case Two

A 51-year-old white female, employed as a secretary for a floral shop, was admitted to Wesley Medical Center with a five- to six-week history of progressive dyspnea. She had been treated with doxycycline twice by her family physician without relief of symptoms. She had a low grade fever of 99-101F (37.2C-38.3C), a persistent, non-productive cough, and generalized myalgia as if she had the "flu." She had been taking nitrofurantoin for three years because of recurrent urinary tract infections.

Her past history was not significant, except for a cholecystectomy complicated by a common duct stricture. A choledochojejunostomy was performed; however, the patient continued to have ascending cholangitis at two to eight month intervals. The family history and review of systems were non-contributory.

On physical examination, the patient was found to be tachypneic with respiratory rate of 24, and had dyspnea with minimal exertion. There was a mild tachycardia of 104 beats per minute. There were fine, crepitant rales heard bilaterally over the lower two-thirds of both lung fields. A grade II/VI systolic murmur was heard best at the left sternal border in the second to fourth interspaces. P2 was accentuated greater than A2. The remaining results of physical examination were normal. On admission, SMA-12 revealed a low albumin at 2.9 gm/100 ml, serum alkaline phosphatase of greater than 350 international units per 100 ml, and SGOT at 185 international units. CBC was within normal limits: hemoglobin, 13.5 gm/100 ml; hematocit, 42%; WBC, 5,400/cu mm with a normal differential. Sputum for routine fungal and acid-fast bacilli culture showed no growth. Three sputums for cytology were negative; blood gases: pH 7.40; pCO2 39; pO2 90. A chest x-ray on June 7, 1972, showed an extensive interstitial infiltrate in both lungs, which had progressed since June 7, 1972, and was not present in 1969. Pulmonary function studies showed moderate restrictive disease. A lung biopsy was performed on June 26, 1972, and revealed chronic organizing pneumonitis. A liver biopsy on July 1, 1972, revealed regenerated liver with mild portal fibrosis. Purified protein derivative (PPD) and histoplasmosis skin tests were normal.

The patient was started on a regimen of prednisone, 60 mg daily. She was discharged on a decreasing dose of steroids markedly improved.

Discussion

Drugs, both directly and indirectly, can affect the lung. Antibiotics and corticosteroids are known to lead to superinfection with opportunistic organisms. Diffuse pulmonary disease can be induced by busulfan, cyclophosphamide, bleomycin, oxygen, pituitary snuff, and many other drugs. Mediastinal and hilar adenopathy can be caused by diphenylhydantoin and methotrexate. Pleural effusions can result from methysergide and drug-induced systemic lupus erythematosus. Pulmonary calcification is an occasional side effect of using Vitamin D, calcium, and inorganic phosphates. Bronchoconstriction is a commonly recognized adverse reaction from propranolol, aerosolized drugs, pituitary snuff, and aspirin. Respiratory muscle paralysis can result from using neomycin, polymyxin B, colistin, kanamycin, streptomycin, and gentamicin. Nitrofurantoin, however, next to oxygen and corticosteroids, is the drug most commonly reported to produce pulmonary disease.[1-3]

Although alluded to as early as 1957, it was not until 1962, that Israel and Diamond[4] first described the syndrome of pulmonary reaction to nitrofurantoin. Their patients developed cough, fever, pulmonary infiltrations, and dyspnea following treatment with nitrofurantoin. The investigators felt this represented something more than Loeffler's syndrome. Onset of symptoms occurred sooner with each subsequent drug ingestion in their patients.

There are at least two modes of presentation of nitrofurantoin lung disease: an acute and a non-acute reaction. The acute type of presentation is characterized by fever, chills, dyspnea, and cough which occur within hours to several days after administration of the drug. The chest x-ray shows a diffuse interstitial infiltrate which is non-specific and will clear 24-48 hours after the intake of the drug is stopped. The diagnosis is made by careful drug history, characteristic x-ray findings and, if necessary, drug challenge. Eosinophilia is often absent initially, but is more frequent with subsequent episodes. The patient often has hypoxemia with mild hypercapnia. The differential diagnosis includes pulmonary edema, tracheobronchitis, myocardial infarction, or congestive heart failure. With a nitrofurantoin reaction, however, there is usually no frothy pink sputum, pulsus alternans, apical gallop, or prolonged circulation time.

Sollaccio and his associates[5] were the first to point out

that the pulmonary reaction can be delayed. They described a "subacute" period four weeks before the onset of symptoms. Rosenow, DeRemee, and Dines[6] subsequently reported on five patients in whom symptoms did not begin until six months to six years after continual exposure to the drug. Pleural effusion was not present in any of their patients, but pulmonary function studies were abnormal with evidence of restrictive disease and impairment of carbon monoxide diffusing capacity. None of the patients in this study had eosinophilia. A lung biopsy revealed chronic interstitial pneumonitis, fibrosis, or both. All of the patients were followed; four of the five showed improvement after discontinuing the regimen of nitrofurantoin and undergoing treatment with steroids.

The chronic reaction is more difficult to diagnose, primarily because of its insidious onset. There is usually no fever, pleural effusion, or eosinophilia. Generally, the patient has received the drug for months to years before the onset of pulmonary changes. The chest x-ray shows a non-specific, diffuse bilateral interstitial pulmonary process. The lung biopsy shows a chronic inflammatory infiltration, interstitial fibrosis, or both. Such patients do not respond to challenge with dramatic results as do those in the acute presentation. Again, drug history is important and may be the only clue to the diagnosis. It is found that many cases are misdiagnosed for Hamman-Rich syndrome during the first examination.

Pathogenesis of the pulmonary changes from nitrofurantoin is not known, but can best be explained on the basis of an allergic hypersensitivity reaction. Glueck and Janower[7] theorize that subsequent alteration in capillary permeability permits transudation of fluid into the interstitial spaces, interstitial edema, and impairment of gas exchange. Eosinophilia and skin rash which occasionally accompany this syndrome help point to an allergic basis. Also, the chest x-ray returns to normal within several days, suggesting an allergic transudation. The pulmonary arteries are known to show subsequent dilatation with the onset of interstitial edema which may be secondary to increased resistance in the interstitial tissues impeding pulmonary blood flow and subsequent pulmonary artery dilatation.

Treatment of this syndrome demands, first, recognition that nitrofurantoin is the cause of the pulmonary findings, and then discontinuing the drug. To expedite improvement in symptoms and clearing of the chest x-ray, steroids in relatively high doses (60-80 mg prednisone per day) may be started. This is tapered over a relatively long period of time (6-8 months). In addition, a number of other medications are many times useful in relieving symptoms: aminophylline, IPPB, myocardial stimulants, oxygen, sedatives, vitamins, and supportive care. In general, the most important aspect of treatment consists of discontinuing the intake of nitrofurantoin.

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Deafness

Review of Intravenous Ethacrynic Acid

G. D. BEAUCHAMP, M.D., M. J. GUASTELLO, M.D., *and* T. C. CROUCH, M.D., *Kansas City, Missouri*

INFORMATION regarding the pharmacological effects of potent diuretic agents has been published. Ethacrynic acid, 2-3 dichloro-4 (2-methylene butyryl) phenoxyacetic acid has been utilized for renal, hepatic, and cardiovascular problems. It and furosemide, although dissimilar chemically, share many properties, including mechanism of action and physiological effects.[1]

Many of the side effects of the two agents are also similar. The rapid action and massive diuresis produced by ethacrynic acid with the associated loss of body sodium, potassium, chloride, hydrogen ion, and water have been reported.[2] Cases of cardiovascular collapse secondary to the loss of as much as 50 per cent of the sodium in the glomerular filtrate exemplify their potency. The production of the so-called "contraction alkalosis" was reported by DeRubertis, *et al.*[3] Although the exact mechanism of this complication is not known, theoretic possibilities are discussed in the latter article. A variety of adverse effects appeared as ethacrynic acid became more widely utilized. In 1966, a second case of fatal agranulocytosis was reported. Schmidt and Friedman[4] described ventricular fibrillation as a consequence of massive fluid and electrolyte imbalance secondary to ethacrynic acid administration. Visceral injuries include reports of hepatocellular damage, cholestatic jaundice, and gastrointestinal bleeding. Adverse metabolic effects, including hypoglycemia and hyperuricemia, have appeared.

Recently, Meriwether *et al.*[5] reviewed the cases of ototoxicity resulting in transient or permanent deafness related to ethacrynic acid. The following case adds to the expanding list of toxic responses.

Case Report

A 57-year-old Negro man was admitted to another hospital with a history of postprandial nausea and vomiting, associated with mild abdominal cramps which occurred five days before admission. The patient then noted abdominal swelling and persistent right-lower quadrant pain. He passed no gas per rectum after the onset of the pain, and an enema given the evening before admission resulted in no return. The past medical history, family history, and social history were all negative or noncontributory. At the time of admission the patient's temperature was 99F (37.2C), his abdomen was distended, and bowel sounds were absent. Right-lower quadrant tenderness to light palpation was noted. There were no palpable masses or rebound tenderness.

A case report of deafness and review of ethacrynic acid, aminoglycoside antibiotics, and renal insufficiency interrelationships is presented.

The patient was vomiting fecal-looking material. The remainder of the physical examination was recorded as being within normal limits.

X-rays revealed dilated loops of the small intestine with multiple fluid levels. A barium enema was done without preparation and indicated no obstruction of the colon to the level of the cecum. The chest x-ray was normal. Other objective data included the following values: BUN 85 mg/100 ml; WBC 8,000/cu mm, with 27% Segs, 36% Stabs, 11% Juveniles; Hgb 15.4 gm/100 cc; 1+ proteinuria, and normal serum electrolytes. The electrocardiogram was interpreted as sinus tachycardia with nonspecific ST- and T-wave changes.

On the day of admission, the patient underwent exploratory laparotomy which revealed a gangrenous ruptured appendix with a walled-off abscess in the right-lower quadrant and pelvis. Approximately 12 inches of distal ileum was resected and an end-to-end anastomosis was completed with a Penrose drain and gauze packing left in a portion of the incision. The peritoneal cavity was irrigated with kanamycin solution during the procedure. Postoperatively, the blood pressure, previously 140/89 mm Hg, became unobtainable. The patient was noted to be cyanotic, and an endotracheal tube was reinserted. Intravenous steroids were added to the postoperative regimen of sodium cephalothin and kanamycin sulfate. The patient's urinary output had been less than 450 ml for three consecutive 24-hour periods. This was treated with fluids and intermittent intravenous mannitol. He received 50 mg of ethacrynic acid intravenously, and 200 mg intravenously on the following

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day. In view of the deteriorating clinical picture, including falling urinary output, the rising BUN concentration of 249 mg/100 ml, a serum creatinine of 11.7 mg/100 ml, the falling hemoglobin value of 8.7 gm/100 ml despite transfusions, the patient was transferred to St. Luke's Hospital, Kansas City, Missouri.

On March 8, 1971, the fifth postoperative day, he arrived at St. Luke's Hospital in an obtunded state. The blood pressure was 180/80 mm Hg, the pulse rate 120 beats per minute, and the temperature 97.8F (36.5C). Other pertinent physical findings consisted of elevated jugular venous pressure, bilateral expiratory wheezes, an irregularly irregular tachycardia, and a distended abdomen with bowel sounds. The neurological examination showed an obtunded patient, deaf, with asterixis present. The patient was given digoxin, placed on hemodialysis, and began to improve slowly. On the sixth hospital day the patient vomited blood, which required several transfusions. Esophagoscopy and gastroscopy revealed normal stomach mucosa and a hemorrhagic esophagitis. This was treated with nasogastric suction and antacids. A further complication consisted of positive cultures of Pseudomonas from the original abdominal wound and from the sputum, accompanied by diffuse pneumonitis on the chest x-ray. Having documented total nerve deafness by audiogram *(Figure 1)*, the infections were treated with penicillin and gentamicin sulfate with marked improvement.

At the time of admission to St. Luke's, the following laboratory values were obtained: BUN 255 mg/100 ml (normal 10-20 mg/100 ml); serum creatinine 13.6 mg/100 ml (normal 0.5-1.5 mg/100 ml); hemoglobin

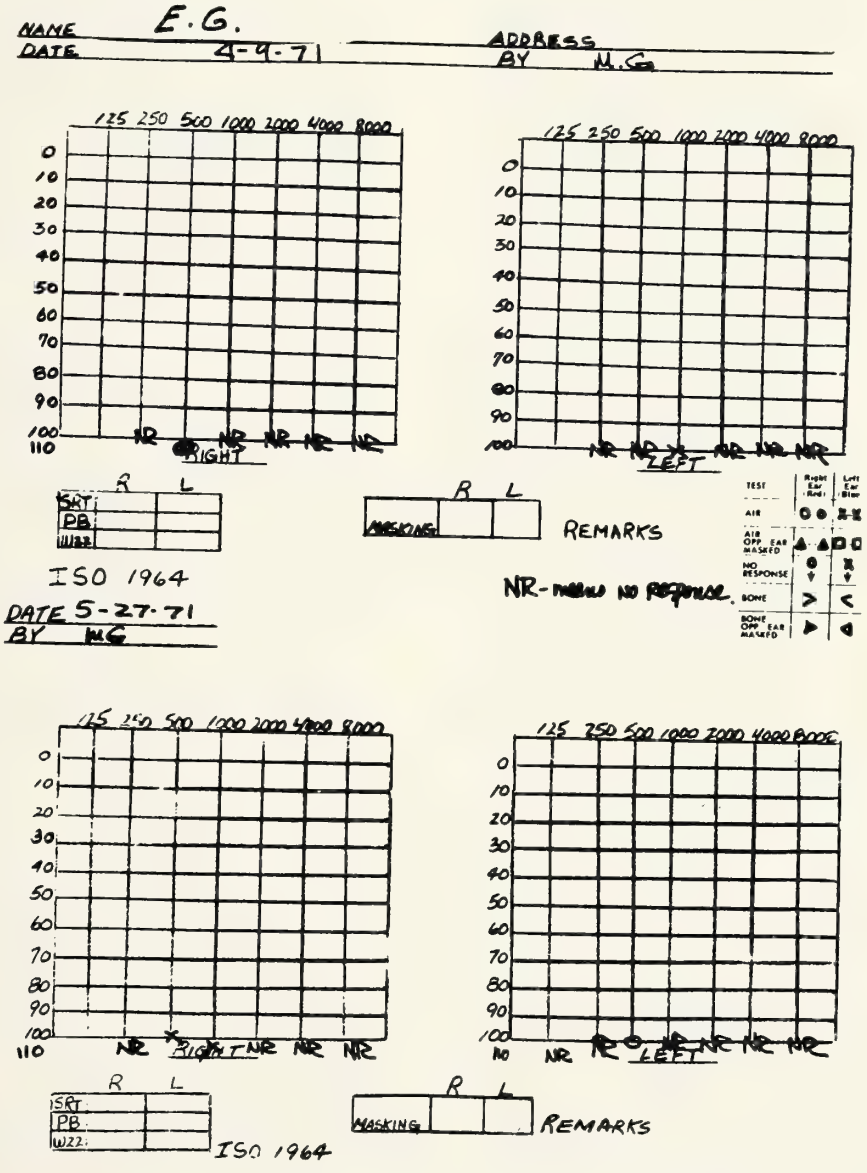


Figure 1. Audiograms reveal bilateral total nerve deafness.

7.9 gm/100 ml (normal 14-17 gm/100 ml); calcium 5.5 mg/100 ml (normal 8.5-10.5 mg/100 ml); phosphorus 8.7 mg/100 ml (normal 2.5-4.5 mg/100 ml); and uric acid 27 mg/100 ml (normal 2.5-8.0 mg/100 ml). His urinary output averaged less than 300 ml per 24 hours for several days. On the 14th day of hemodialysis, the urinary output was 1000 ml/24 hours with progressive improvement in renal function.

Prior to discharge, the following laboratory data had been recorded: BUN 15 mg/100 ml; serum creatinine 2.0 mg/100 ml; serum calcium 8.7 mg/100 ml; serum phosphorus 4.5 mg/100 ml; uric acid 3.3 mg/100 ml. The patient was averaging approximately 3,000 ml of urine per day. At the latest followup evaluation, the serum creatinine level was 1.3 mg/100 ml and the BUN 13 mg/100 ml. However, the total nerve deafness persisted. This case required meticulous care from the onset and illustrates the complexity involved in treating acute renal failure.

Ethacrynic acid, one of the potent diuretics, and its association with acute neurosensory hearing loss has been reviewed by Meriwether *et al.*[5] Additional case reports have appeared since this review.[6, 7] Of the cases which reported the blood urea nitrogen as a measure of renal function, the majority received ethacrynic acid in a clinical setting of renal insufficiency and azotemia.[7-11] The average BUN level for the entire group was greater than 100 mg/100 ml. Of those receiving ethacrynic acid intravenously, 100 mg or more was often administered within a 24-hour period. When oral medication was given, the dose was equal to or greater than the maximal recommended dose of 200 mg. It is evident that deafness associated with ethacrynic acid usually occurs in azotemic patients, and that the patients often received greater than standard recommended doses of 0.5-1 mg/kg.[2]

Several authors[11, 12] have considered the possibility of deafness from the combined effects of aminoglycoside antibiotics and ethacrynic acid. Thirteen of the twenty-six cases reviewed by Meriwether *et al.*, as well as the present patient, received these antibiotics during the period of administration of ethacrynic acid. Various investigators have described degeneration of outer hair cells in the basal turn of the cochlea,[13] primary depression of the cochlear microphonic and action potential,[14] atrophy of the intermediate cell layer of the stria,[15] and alterations in the sodium and potassium concentrations in the endolymph[16, 17] associated with ethacrynic acid administration. As originally postulated by Schneider and Becker[8] (1966), the latent period found by Mathog and others [14, 18] provides suggestive evidence for toxicity secondary to metabolic transformation. Further work is required to better define the mechanism of the ototoxicity associated with ethacrynic acid.

Summary

This case describes complications of ruptured appendicitis with peritonitis and abscess formation including: hypotension, acute renal failure, wound infection, septicemia with pneumonitis, acute hemorrhagic esophagitis, and deafness secondary to utilization of ototoxic drugs. With current medical therapy the patient survived these numerous problems. Unfortunately, the deafness is permanent. It is possible that the latter complication could have been avoided by judiciously choosing different medications in the early stages of treatment.

Both transient and permanent deafness complicating ethacrynic acid administration is well documented. It is imperative that the practitioner recognize this potential toxic effect. Particular caution must be observed in the clinical setting of renal insufficiency with oliguria and azotemia. Until the specific relationship between the aminoglycoside antibiotics and ethacrynic acid is better defined, physicians should, if possible, avoid their combined administration. Furthermore, prior to administration of the aminoglycosides or ethacrynic acid, pretreatment renal status, audiograms, and vestibular tests should be completed for a baseline. Careful followup and serial testing during the course of treatment are advised.

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(Continued on page 180)



Medical HISTORY

Louis W. Sauer—The Conqueror of Pertussis

RONALD D. GREENWOOD, M.D., ***Boston, Massachusetts***

LOUIS WENDLIN SAUER, the son of a druggist, was born on August 13, 1885, in Cincinnati, Ohio. His education began in Europe, where he attended Berlin University from 1909 to 1912; he then returned to Chicago, and graduated from Rush Medical College in 1913. He later earned a Ph.D. degree in pathology from the University of Chicago. Sauer married Lucia Mira Soypelt on August 20, 1912, in Berlin, Germany. In 1924, he returned to Europe to study. His preceptors were Professor Postischill, director of the Whooping Cough Hospital in Vienna, and Professor Bordet, at the Pasteur Institute in Brussels.

Sauer began his academic standing as attending physician at Evanston Hospital in 1913, and was an instructor in pediatrics at Rush. He switched to Northwestern and rose through the ranks to associate professor emeritus. He held positions also as medical director of St. Vincent's Infant and Maternity Hospital in Chicago, medical director of The Cradle, in Evanston, and chief of pediatrics at Evanston Hospital. He was a member of a number of local and national organizations. He is now retired and lives in Florida.

Sauer was the author of several books. *Nursery Guide,* first written in 1923, with second and third editions in 1926 and 1933, was written for mothers and children's nurses. Sauer felt that

> The care, nourishment and ills of infants are so different from those of children and adults that they deserve special consideration.
>
> The person in charge of an infant has unparalleled responsibilities, for to her is entrusted the progeny of our race. Through providing proper care and nourishment, the ills of infancy are greatly reduced.

In this book Dr. Sauer covered all topics: general care and development, the nursing infant, the premature infant, artificial feeding, nutritional disturbances, common diseases, and care of the sick infant.

From Infancy through Childhood was written in 1942, and included many of the topics included in the *Nursery Guide.* Again, this was a useful text for the lay public. This book had additions on physicial health and mental health, the adopted child, and an appendix on accidents, poisons, and antidotes.

Sauer wrote nearly 100 papers. Most were on infectious disease. However, topics such as malnourished children, pyloric stenosis, nursery technique, and many others were included in his work.

Louis Sauer, with Ivan Rosenstern, pioneered in developing techniques for prevention of infection among newborn infants awaiting adoption. The Cradle was an adoption hospital in Evanston.

His greatest achievement was the perfection of the basic techniques for producing a vaccine against whooping cough. At the time this was done in 1932, the death rate in children from pertussis was 234.2 per 100,000. Today, death connected with this disease is almost unheard of.

In the 1940s, Sauer collaborated in developing a triple antigen vaccine against whooping cough, diphtheria, and tetanus. Now DPT is taken by every child as part of his immunization. Millions of children have benefited from Dr. Sauer's research.

Sauer's work was done at Evanston Hospital while he was an associate in pediatrics at Northwestern. He describes his work as follows:

> Back in 1933, four small boys—brothers—and their mother shut themselves into an apartment in Evanston, Illinois, in a voluntary quarantine which has had far-reaching effects in the elimination of one of the most dreaded diseases of childhood. All of the boys had been inoculated with 150 pertussis bacilli whooping cough germs. Four months earlier, their father (Dr. Sauer) and

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The opinions expressed herein are those of the author and not the US Army.

his associates had injected into two of them a whooping cough vaccine prepared at the Evanston Hospital Whooping Cough Research Laboratory. Conditions in the apartment were carefully controlled to simulate the intimate exposures of indoor childhood play. The experiment was to prove once and for all that the disease was caused solely by the pertussis bacillus, and that it could be prevented by injections of the powerful vaccine. The boys' father—a doctor—supervised all the details of the test, which had been carefully planned for over a year, and the mother—a former nurse—kept an accurate day-by-day record of observations on all the boys throughout the period of their confinement.

Within a fortnight after the bacilli had been dropped into their nostrils, just as a child might breathe them in if exposed at play with a whooping cough patient, the boys who had not been vaccinated developed a cough that became progressively worse. Plates exposed to the coughing boys became overgrown with colonies of the whooping cough germ—many more than had been introduced into their nostrils two weeks earlier. Their coughs and blood counts became typical of the disease.

The boys who had been vaccinated previously never coughed nor could a single colony of the pertussis bacillus be recovered from cough plates held before their mouths as they tried to produce coughs. The count of their white blood cells remained normal, in spite of every effort to make the exposure of their brothers effective. To this day (note: written in 1942) neither of the vaccinated boys has had whooping cough. Thus, after centuries of dreadful epidemics and after more than thirty years of specific observations of the germ itself, it was finally proved that whooping cough can be prevented.

Widespread use of the vaccine since the completion of the Evanston experience has brought uniformly satisfactory results where proper concentrations of the vaccine are injected into children at intervals shown to be most effective.

This overwhelming success was not immediate, however. Sauer wrote:

Unexpected obstacles arose when the Northwestern University Medical School of Chicago first authorized the commercial production of whooping cough vaccine. . . . Numerous lots of vaccine made in 1934 failed to protect, and it took a year to find the reason—the most effective concentration is now known to be of "intermediate strength"—15,000 million bacilli per cubic centimeter. Moreover, it has been demonstrated in a study of 1,400 infants at The Cradle in Evanston that whooping cough develops about seven times as frequently in children who are given the injections before the third month of life as in those whose injections are given after the eighth month; the younger infants apparently fail to develop the power to utilize the vaccine. It was also found that the best and most lasting results were obtained when the vaccine was injected at three-week intervals instead of weekly. Many of the infants required three or four months after the last injection before the immunity was developed.

So, after years of helpless feelings of parents who watched their child, usually their youngest, develop the malady and die, after thousands died yearly with whooping cough, Dr. Sauer made the disease preventable.

Today, our society fears certain diseases—for instance, cancer—but there is no disease which sweeps the country leaving behind many dead children. The whoop that medical students look for and never find was once known to every parent.

Sauer had become an authority, in fact *the* authority, on this disease. He would write dozens of papers on pertussis.

The researchers at Northwestern, at Evanston Hospital, were also the first to give pertussis to animals. Early attempts to produce pertussis in dogs and cats were very misleading. The animals did not develop pertussis, and when they would develop a cough it was usually due to distemper. Successful experiments were completed at the Evanston Hospital Whooping Cough Research Laboratory in 1925-1927. Here pertussis was developed in a group of baby monkeys. They were inoculated with freshly isolated cultures of the pertussis organism, and within two weeks a number were coughing. The cough was typical, the bacteria were recovered, and the monkeys were later immune to huge doses of the live pertussis organism.

"You aim high and miss, but it's better than not to aim at all."—L. W. Sauer.

NEW MEMBERS

The JOURNAL *takes this opportunity to welcome these new members into the Kansas Medical Society.*

William A. Bailey, M.D.
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Fred A. Freeman, M.D.
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Bert W. Harned, M.D.
7500 West 95th St.
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2406 Whitehall Manor
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The President's Message

Two Urgent Concerns

Professional Liability

Elsewhere in this issue of the JOURNAL, you will find the thoughtful position paper on professional liability and medical injury compensation prepared on your behalf by the Commission on Professional Liability of the KMS. I commend to your very careful reading this excellent statement of the several major problems at issue and the manner in which the Commission and the leadership of your Society propose to address them.

Accompanying statement of the issues is a summary of the principal concepts embodied in specific legislative proposals the Kansas Medical Society hopes to present to the Interim Study Committee on Malpractice of the Kansas Legislature during July 1975. Companion legislation is also contemplated to require a more meaningful disclosure of allegation and claims experience by insurors, a more clearly defined relationship of premium rates to Kansas experience in the medical liability area, and legislative authority for a risk management program directed by the Commissioner of Insurance, which could virtually guarantee the availability of insurance to every responsible physician. The Board of Healing Arts will be encouraged to use its existing authority to formally recognize the continuing medical education requirements for membership in the KMS as the basic requirement for recredentialing Kansas physicians. More responsive patient grievance mechanisms and educational programs directed at common causes of injury and malpractice allegation will be developed.

Every Kansas physician must participate in this effort to assure the continued availability of quality medical care for Kansas citizens. We hope to enlist a broad cross section of public leadership as we work to convince the legislature of both the urgency and the merit of the legislative program we have developed.

As individual physicians and KMS members, each of us can help through prompt payment of the $50.00 dues assessment now. A generous response to an appeal for contributions to the President's Fund later in the year



may become necessary to supplement the assessment, to support your elected leadership and the Commission on Professional Liability and Committee on Legislation as they work in your behalf, and through personal contact with each and every member of the interim study committee and every legislator.

The time is now. We must not fail!

Health Planning

Public Law 93-641, the Health Planning and Resources Development Act of 1974, may be a very mixed bag for Kansas citizens and Kansas physicians. Last month, the Governor and I exchanged differing views in these pages on the matter of his designation of the three metropolitan counties surrounding Kansas City—and our Medical School—as part of a metropolitan HSA embracing a majority population on the Missouri side.

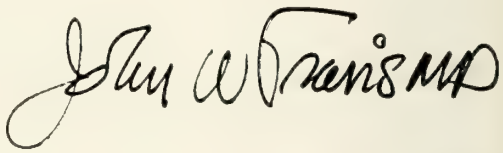
More recent events have led to a genuine concern on the part of the Kansas Medical Society, that the Secretary of the Kansas Department of Health and Environ-

ment may have a conception of his role as the director of a designated "State Agency," under the law which could lead to the establishment of a sole resource and authority in the area of planning for and development of all medical services in Kansas. It is our intention that state-wide organizations of health professionals and health care institutions—especially the Kansas Medical Society and the Kansas Hospital Association—should share major participation in the planning process with the Kansas Department of Health and Environment. The Kansas Medical Society has offered generous treatment and open friendliness to Mr. Dwight Metzler, Secretary of H&E, since his arrival on the scene in the waning days of the Docking Administration. Mr. Metzler's ambitious efforts to obtain federal grant monies to establish a demonstration project for the delivery of medical services in the rural areas of Kansas were greatly facilitated through the good offices of the Kansas Medical Society, partly because the KMS recognizes the need of new solutions to the problem of medically underserved rural areas, but also because it seemed an excellent opportunity to establish a spirit of cooperation with the Department. Unfortunately, we were unaware that even then, in early May, the Department staff was working on a planning document which, if carried out, could effectively exclude organized medicine from a meaningful participation in regional and state-wide planning activities mandated by PL 93-641.

At this writing, the Kansas Medical Society is pursuing with vigor and sincerity an involvement in the planning for and development of HSAs in concert with other voluntary professional groups. This activity will take the form of educational programs and assistance to groups of health professionals and consumers interested in organizing a representative HSA in each of the designated areas of Kansas. We believe this is a necessary and proper role for the Kansas Medical Society and other similar groups.

Planning for the future of medical care and health service institutions in Kansas without major involvement by the state-wide organizations representing physicians and hospitals would be absurd. We earnestly seek reassurance that Governor Bennett and Mr. Metzler share that view.

Fraternally,



President

Interim Session

of the

KMS HOUSE OF DELEGATES

Sunday, November 16, 1975–9:00 A.M.

Holiday Inn, Lawrence

One-day business meeting to consider items relating to legislation and others that cannot be delayed until May. It is hoped all component societies will be represented by their full complement of delegates.

All members of the Society are invited.

ALL RESOLUTIONS MUST BE SUBMITTED TO THE KANSAS MEDICAL SOCIETY NOT LATER THAN OCTOBER 15, 1975. THEY WILL BE REPRODUCED IN SUFFICIENT QUANTITY TO PASS OUT TO THE DELEGATES AT THE MEETING.



Editorial COMMENT

The Position Paper

Elsewhere in this issue we are publishing the position paper on professional liability which has been prepared by the Legislative Planning Committee. We call it to your attention particularly because it may be one of the most significant items of Kansas Medical Society business we shall ever publish. Martin Halley and his committee were directed by the House of Delegates to study the professional liability problem as it related to Kansas and to prepare this paper which will serve to guide the Society in its efforts to accomplish a patients' compensation act which will promote and protect the rights of all the parties involved in this critical matter. The professional liability situation has not yet deteriorated in Kansas to the extent that it has in many states, but it is essential that the state, the medical society, the legal profession, and the public proceed without delay to accomplish a lasting solution and avoid the catastrophic condition which has developed in some areas.

The committee report (and we are sure the committee members would approve our noting that it is largely the work of Dr. Halley, whose JD degree permits him to bring some legal philosophy to bear on the effort) appropriately addresses the adverse effects which have obtained from the highly complicated medical, legal, and social interrelationships which have precipitated the crisis. It is oriented toward patient compensation, not with the intent of devising either a punitive—or protective—system directed toward the medical profession, but with the primary purpose of promoting optimum patient care through appropriate professional control, with a realistic method of compensation when injury to the patient warrants it as a result of his medical experience.

We usually try to avoid repetition of subject matter in these columns, especially back-to-back as in this case, since our comments of last month touch on one limited facet of the malpractice problem. However, the importance of the subject and coincidental release of the report justify calling the attention of our readers to the report and urging that they familiarize themselves with it.

The traditional adversaries in malpractice actions have been the lawyer and the physician, and whatever progress has been made in the past has been in spite of mutual disaffection of complex origin. We are certain, however, that both groups are sufficiently disturbed by the ominous conditions now present that, paradoxically, the prospects for objective and less passionate efforts toward a lasting solution may be better than they have ever been before. However, it brings to mind that there is another party to the conflict whose role in the crisis has been given insufficient attention—or perhaps the wrong emphasis: the public. Every examination of this problem has noted that the rights and welfare of the patient are paramount in the adjudication, and must be protected. Is there not, therefore, good reason to consider in greater depth the role, other than as the allegedly injured party, which the public has played? "Public," in this context, encompasses the patient, his family, his friends, the whole social structure in which this drama has been performed. We do not think this public has deliberately—even knowingly—set out to produce the present state of affairs, but it must be considered that two salient features have marked the development of the problem: the significant increase in the number of malpractice actions (and the below-the-surface portion of the iceberg—those cases which have not come to formal action), and the tremendous increase in the awards in many of these cases.

Now we doubt that the medical profession has suddenly developed the degree and extent of incompetence which would account for these increases. The increasing complexity of medical practice has greatly enlarged the sources and possibilities of untoward effect of treatment and, consequently, increased the exposure of the physician to risk of iatrogenic damage to the patient. But this reflects the extension of the profession into areas of higher risk in contention against new and greater odds,

the *sine qua non* of progress, not a sudden eruption of bungling by incompetents.

Furthermore, we doubt (though saying so may send some of our colleagues hunting for the heretic's stake) that the legal profession has suddenly spawned a large number of ambulance-chasing trial lawyers to account for this upsurge. It has been suggested that the growth of no-fault automobile insurance has released a number of these individuals who now find work in this adjacent field to their liking. But we think the legal profession overall will be just as willing to see such individuals contained as the medical profession will be to see its misfits subjected to better control.

But what of the public contribution to the problem? Consider the insurance-security-welfare milieu in which we function today. Our lives are insured so that if we die our survivors can survive. Health is insured and if one is ill or disabled, he expects to be compensated so the experience will not cost him—and he may even make a little. Automobiles and homes are insured and we expect, if they are damaged, that insurance coverage will relieve any financial strain. The employee is discharged—unemployment compensation is waiting. We survive to age 65 and are compensated thereafter for the achievement. The professional consumers' advocates assure us that any failure of substance or service must be the fault of the provider and therefore compensable to the consumer.

Thus, we submit, the individual whose medical or surgical experience has been damaging—or presumed so—feels fully justified in seeking redress. If this involves a malpractice action, so be it. After all, the physician, already protected by a highly publicized affluence, has insurance, so it isn't really a personal gesture—just getting what is due. We also submit that the public would be disbelieving, even shocked, if confronted with the proposition that its philosophy has contributed more to the present crisis than the "incompetent" physician or ambulance-chasing lawyer. This disbelief is engendered by misleading advice it gets from such authoritative sources as *Time,* which reported in its June 16 issue that "the incidence of medical malpractice can be reduced radically if doctors will do a better job of policing themselves." (And in the paragraph following this startling comment, it notes, "Physicians can earn the right to practice [medicine] only if they learn from their experiences—and mistakes.")

The public attitude can be traced in another direction. Health was at one time considered a blessing, a proper reward for good ancestry and clean living, a thing to be desired but worked for. Today, it is a right. Compensation is due from anyone who may obstruct this right—or as in the case of the physician, fail to restore it promptly and wholly when it is displaced. The desire has become the expectation, the privilege has become the demand. Medical successes which increase survival and productivity are the norm, and failure to achieve this success is, to the involved individual, cause for compensation.

As for the awards, the public is conditioned to think in grandiose terms. A national debt of astronomical amounts, appropriations in the billions range, fabulous salaries of sports and entertainment figures are splendid preparation to consider that awards should be based on the maximum obtainable, not a justifiable compensation bearing specific relationship to the degree of injury.

Our purpose is not to mount an attack on the public, but to call attention to the fact that in the coming negotiations to produce a patients' compensation act, the public (read patients) must be a party to the process, and must be given a clear understanding that the concern for their rights expressed in the effort cannot be fully productive unless the public brings to the negotiations a realization of its responsibility, since it—not the physician or lawyer—is the real beneficiary.

As the efforts of the Kansas Medical Society to develop the patients' compensation act progress, every physician will have a part to play and a stake in the results. It will be a difficult role, because of the high emotional charge in the issues which must be resolved in order to produce a comprehensive and lasting solution. It will require of the physician particular tact and diplomacy to bring to his patients an understanding of their responsibility, but we believe this to be just as important as the physician-lawyer confrontation. It is not just a question of the availability and cost of malpractice insurance. It is still a matter of the fundamental relationship between the physicians and their patients—the public. —*D.E.G.*

JOINT PRACTICE COMMITTEE

The Joint Practice Committee of the Kansas Medical Society and the Kansas State Nurses Association are interested in hearing how you utilize the nurse in your practice: What responsibilities and working arrangements have you defined for your nurse, and what has been the patient response?

Please address your responses to:

Joint Practice Committee
The Kansas Medical Society
1300 Topeka Avenue
Topeka, Kansas 66612

Professional Liability Problem

KMS Position Paper

(Ed. Note: Resolution No. 75-18 established the KMS Commission on Professional Liability and Medico-Legal Affairs. Resolution No. 75-26 directed the Commission to prepare a comprehensive medical injury compensation study to be presented to the Kansas Legislature.

The Legislative Planning Committee, under the chairmanship of M. Martin Halley, M.D., Topeka, submits the following position paper for consideration in the Kansas Legislature.)

Introduction

The medical profession, as well as the entire health care industry, is deeply concerned that patient care is suffering because of progressive deterioration of the malpractice situation, recently brought into sharp focus by the crisis in cost and availability of liability insurance.

Comprehensive legislation is essential for a long-term solution of this complex problem, which involves most importantly the patient—the primary beneficiary of health care—who must be assured the highest quality of care, protection from injury, and compensation for injury when it occurs. The combined resources of all health care professions, the legal profession, the insurance industry, and government must be applied to this public purpose.

The Kansas Medical Society has identified, and herein presents, the major areas of concern, and supports the enactment of a comprehensive remedial legislative program. It is hoped that our Legislature will address itself to these critical issues at an early time.

1. Health care practices are adversely affected by the impact of a steadily rising volume of claims and lawsuits. This unhealthy climate for health care delivery must be improved.

The increasingly aggressive legal environment surrounding health care practitioners has had a profoundly negative effect upon provider-patient relationships, and has resulted in undesirable modifications of patient care through compensatory changes in medical practices.

One aspect of this deplorable phenomenon is that the fundamental physician-patient relationship, already weakened by changing patterns of health care delivery, has been further compromised by provider responses to a hostile environment. Here, the additional consideration of legal risks has assumed increasing importance as providers have attempted to minimize legal problems with the consideration of each patient also as a potential plaintiff. This intrusion of the adversary process into relationships requiring trust and harmony, a disruptive paradox in an era of ever-improving health care, has been a causative factor of current malpractice problems, and continues to cloud the health care environment.

Another aspect of the same phenomenon has been the widespread practice of defensive medicine. Substantial and undesirable effects upon patient care have resulted from such medical practice alterations for the purpose of avoiding or defending possible lawsuits. These effects involve the quality of health care, the risks of procedures, the convenience of the patient, and the total cost.

Positive defensive medicine involves the performance of procedures not medically indicated. Specific examples are additional laboratory tests, additional diagnostic procedures, additional x-rays, additional office visits, additional or extended hospitalizations, or additional medical consultations.

Negative defensive medical practices occur when an indicated procedure is not performed for fear of legal consequences. Examples of negative practices are avoidance of specific surgical procedures, refusal or referral of certain cases, refusal of certain emergencies, and strict limitation of practice. Negative practices may further limit the availability of care since legal risks are a factor in physicians' choice of specialty, choice of practice locations, and in decisions for early retirement.

A third form of defensive medicine, fully as serious in potential consequences, has been an apparent reluctance of some physicians to publish scientific material or otherwise communicate professional information for fear of possible unfavorable legal results.

These undesirable effects and practices, as well as resulting increases in health care costs, are inexorable consequences of the current medical malpractice problem. The comprehensive remedial legislation supported by the Kansas Medical Society is designed to effect overall improvement in this complex and unhealthy climate.

2. The professional liability insurance market is unstable. A program for long-term stabilization is mandatory.

Physicians and hospitals, as well as other providers, are presently faced with crises in the area of professional liability insurance precipitated by dramatic in-

creases in insurance premiums, difficulty in availability of insurance at any price, and the withdrawal of insurers from the field. The patient again is the ultimate loser, since health care cannot continue without adequate insurance coverage, and since cost increases are ultimately passed on to the consumer. The instability of the insurance market, which serves as a sensitive barometer of the legal risks of medical practice, intensifies the adverse impact of the total complex situation upon patient care.

In Kansas, the situation is not yet as acute as in some other states, but great potential for crisis exists. Two insurers write the major share—86%—of medical liability insurance, and all available companies have indicated reluctance to increase their participation in the Kansas market under present circumstances. This reluctance is the direct result of steadily increasing malpractice claims settlement costs and claims frequency potential, the latter related to the "long tail" of malpractice insurance, made possible by the present lengthy statute of limitations in Kansas.

Health care providers in Kansas, as elsewhere, are experiencing substantial increases in premiums. New physicians are encountering difficulty in obtaining coverage and some have located insurance only through the intervention of the insurance commissioner. Established physicians are required to accept the relatively unsatisfactory provisions of claims-made policies, which pass the insurers' actuarial uncertainties to the insured providers' future years.

Thus, although the short-term insurance market in Kansas appears controlled at present, long-term stabilization as to availability and cost is essential to assure the uninterrupted delivery of health care. This will require legislative action.

Programs under consideration include Joint Underwriting Associations, and physician-owned insurance companies supported by national reinsurance sources. The Kansas Medical Society is presently supporting comprehensive legislation, including the following proposals: limitation of individual provider liability; a state managed patients' compensation fund for awards above the individual limits; a stronger role for the insurance commissioner in management, and in the accumulation of statistical data relative to claims; a risk management program for insuring health care providers unable to locate insurance in the regular market; a shorter statute of limitations to eliminate the disastrous actuarial effects of the "long tail" of malpractice claims; expeditious claim determination; and elimination of the collateral source rule to permit consideration of other payments or benefits received by claimants.

3. Health care costs are increasing due to the malpractice problem.

The increasing volume and severity of claims and lawsuits, the resulting increases in insurance costs, and the medical defensive practices are manifesting an inflationary effect upon total health care costs, which will reach an estimated $115 billion in 1975. The precise cost increase due to the malpractice problem is not known, but substantial effects are caused by increases in hospital or other institutional rates due to rising hospital insurance costs and costs of institutional defensive practices, as well as the increasing costs of physicians' and other providers' defensive practices, and the increasing cost of physicians' liability insurance. Cost containment is a major problem of the health care industry, and is an important benefit of the proposed comprehensive legislative program.

4. Quality assurance in health care is essential, but is not a solution to the malpractice problem.

Patient injuries, real or imagined, or other adverse effects of treatment, are primary causative factors of the malpractice problem, and are increasing as volume and complexity of patient care increase. Many such occurrences cannot be prevented, short of termination of medical practice, since they result from unavoidable treatment complications, accidents and ever-present human error, by otherwise competent practitioners.

This increasing incidence of adverse results—a side effect of modern medical practice—has occurred even though the medical profession has long labored for better and safer patient care through a high degree of self-evaluation and self-regulation, and through constant emphasis on the highest professional standards throughout the long years of physicians' training as well as in the subsequent years of practice.

There is general agreement that even more and even better education is desirable, that maintenance of professional competence through continuing education should be encouraged, that incompetent practitioners should be rehabilitated or removed, that hospital privileges should be limited to the scope of providers' competence, and that ethical principles in practice and in research must be rigorously enforced. There is, however, no evidence, statistical or otherwise, that any one of these areas has been a significant causative factor in the increasing frequency or cost of malpractice claims. Therefore, however inherently beneficial the intensification of such programs may be, these efforts will not significantly ameliorate the medical malpractice problem.

Nevertheless, programs for quality assurance which have long been an integral part of the health care industry must be intensified and extended. Such programs should include evaluation of medical practice by peer review mechanisms, recertification of specialists, re-registration of health care providers based upon proof of participation in continuing medical education, reporting of malpractice claims to the licensing authorities for evaluation and appropriate action, rehabilitation of marginal practitioners, and expanded accident prevention programs. Proposals to this effect are included in the legislative proposals of the Kansas Medical Society.

5. The present system for compensating injured patients is inadequate. Procedural law must be modified to enable expeditious claim determination and fair compensation.

The patient's claim, following an injury, must be promptly evaluated and adjudicated, without undue delay and without the hardships and expenses of prolonged litigation. Claim determination must also occur without unreasonable interference with the continued operation of the health care system, so that providers will not be diverted physically or emotionally from their primary task of patient care. Reasonable, but not excessive compensation must be permitted for the attorney, so that the injured parties' final recovery will not be unduly diminished by large contingent fees. It is submitted that these objectives are not readily attained at present in medical malpractice controversies.

The comprehensive legislative program supported by the Kansas Medical Society encompasses the entire complex medical malpractice problem. It provides a therapeutic approach for total correction, rather than a less effective palliative effort for symptomatic relief. It accomplishes the objectives of substantial justice to the parties, expeditious determination of claims and fair compensation for the injured with a minimum expense, and additionally provides major beneficial effects for health care delivery, health care costs, and liability insurance.

The legislative program in this regard includes the following provisions: Mandatory medical screening panels chaired by an attorney, to evaluate all malpractice claims and provide evidence and testimony at trial if settlement does not occur; expeditious and realistic compensation for claimants undiminished by excessive attorneys' fees; advance payments to claimants with meritorious claims or even to those with doubtful claims; insurance market stabilization as previously discussed; clarification or modification of certain rules of law; consumer protection through quality assurance in health care delivery.

If enacted, the provisions of the program will result in great improvement of all aspects of the health care environment, and will assure uninterrupted delivery of high quality care without the danger of future crises.

6. Substantive law modification should be considered as an alternative approach.

In the event that the requested procedural remedies do not provide an adequate solution for the malpractice problem, legislative modification of substantive law must be considered, perhaps to completely abolish the concept of fault for injury leading to compensation in an approach similar to workmen's compensation law. The comprehensive legislative proposal will include a provision for a legislative study commission to review malpractice data on a continuing basis, and to consider the implementation of pilot studies in no-fault patient injury insurance.

Comprehensive Remedial Legislative Program

The following basic proposals are included in the Kansas Medical Society comprehensive remedial legislative program for professional liability.

The Kansas Medical Society supports a legislative proposal based upon the premise that the highest quality of health care for consumers will be provided by comprehensive remedial legislation aimed at total correction of the entire malpractice problem. Under this proposal, patients will be assured the highest quality of health care, will be protected from injury, and will be expeditiously and fairly compensated when injury does occur. Additionally, implementation of this comprehensive program will have a salutory effect on health care costs, will be instrumental in the prevention of health care crises such as have occurred in other states, and will improve the general climate of health care delivery, so that providers will be able to concentrate on the delivery of care to patients without the constant distractions of vexatious malpractice claims. The proposed legislation is discussed in general terms in these notes,

which will be followed at a later date by more detailed documents.

The comprehensive legislative proposal provides for the patient a *quid pro quo* on an item-for-item basis, and can truly be considered a consumers' bill. It will exert stabilizing effects upon medical practice, hospital practice, other health care providers, the insurance industry and the legal profession, and will promote their effective interaction in the best interest of the patient. Whereas the proposal places a limit on the total amount of recovery in a malpractice action, and also shortens the statute of limitations, it is submitted that there is substantial, more than adequate consideration for these changes in the form of benefits that are provided for patients with claims for injury, benefits which these malpractice claimants otherwise would not enjoy. The following benefits to the public and to potential malpractice claimants are provided in this proposal.

1. *Medical Review Panel:* Recommendation for a review panel composed of three (3) licensed physicians in general practice or the specialty of the physician involved in the controversy and chaired by an attorney. This panel will evaluate the issues of any malpractice claim and make recommendations to the court. All physicians in Kansas would be available for service. This panel would be a major step in the expeditious settlement of most medical-legal claims. It would shorten the time sequence from claim inception to determination.

2. *Compensation Fund:* Creation of a patients' compensation fund to be supervised by the state insurance commissioner from annual assessments of all qualified health care providers, thus guaranteeing a source of payments of meritorious medical injury.

3. *Individual Liability:* A limit of $100,000 to be placed on individual health care provider liability, with awards above the limit to come from the patients' compensation fund, including a level for catastrophic loss compensation of up to $500,000.

4. *Statute of Limitations:* Shortening the statute of limitations to two (2) years, since claims which become evident many years after the alleged act have created an impossible actuarial situation for insurors.

5. *Improved Patient Compensation:* An increase in the proportion of malpractice awards going to the injured patient, resulting from modification of contingent fees.

6. *Collateral Source Rule:* Change in the collateral source rule to admit evidence of other payments received by the claimant.

7. *Dollar Amounts:* Elimination of dollar amounts in plaintiffs' petitions to eliminate adverse prejudicial publicity.

8. *Reporting of Claims:* Compilation of more information and figures for malpractice in the state by reporting all malpractice claims to the state insurance director to assist in actuarial evaluation. All claims to be reported also to the licensing boards with expanded correction authority.

9. *Study Commission:* Creation of a study commission appointed by the governor to review all aspects of malpractice on a continuing basis.

10. *Quality Assurance:* Provision for intensified quality controls and review of medical practice through peer review, continuing education and evaluation by licensing authorities.

11. *Additional:* Clarification of *Informed Consent* . . . clarification of burden of proof . . . and broadening of the definition of *Good Samaritan Act.*

In summary, this legislation—

—will not deny the patient's right to trial by jury, but rather expedites and hopefully settles many claims before they reach this level;
—assists the legal profession by identifying the medical events responsible for the medical injury and by providing expert witness;
—provides that a larger percentage of insurance dollar goes to the patient;
—controls rising premium costs, which in turn means control of rising medical costs to the patient;
—will assure the uninterrupted delivery of high quality health care in Kansas through the prevention of future crises.

MOVING?

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Transcendental Medication

As I sit in my office today and contemplate a system of bureaucracy which has deposited over 1,000 pages of rules and regulations on my desk in the past 30 days, while yet failing to forward my check for last month's wages, I wonder if it's worth it all? My secretary obviously didn't think so, she quit four days ago. Maybe she's smarter than I am? I wonder?

I also wonder who is going to control the health care delivery system in the future? A recent report states that HEW will be spending $500 billion a year in 1985. This past fiscal year they spent about $110 billion. Of that $110 billion, about 23 per cent went for health programs. If that trend is projected to the 1985 estimate, $115 billion will be spent on health programs at that time. One does not have to be a Cal Tech graduate to see that this will be over a 400 per cent increase in spending for health programs within a short span of time. One should note that the 1985 spending estimate does not include any funding for a National Health Insurance Program. As a taxpayer, I fear the day when our favorite Uncle sends every taxpayer the following succinct note:

*U*ntil
*N*ew
*C*ongress
*L*imits
*E*xpenditures

*S*end
*A*ll
*M*oney

We all know who is going to pay for it; but who is going to control it?

The case at hand seems to be utilization review. Within the past two months, a federal court has ruled that PSRO is legal; while, on the other hand, another federal court ruled a preliminary injunction against HEW implementation of the November 29, 1974, Utilization Review Regulations. If Judge Hoffman's injunction is upheld in the higher courts, the matter of who controls utilization review will be settled. PSRO would then be the authority.

We feel, however, that the matter is far from settled. There is, and will continue to be, a great deal of political infighting within the different bureaus and agencies of HEW as to who will control utilization review (UR) in the future. It is acknowledged that the Social Security Administration (SSA) has the political clout on the hill, while the Bureau of Quality Assurance (BQA) is a babe in the woods by comparison. SSA was attempting to control UR through the Bureau of Health Insurance (BHI) when it issued the November 29, 1974, UR Regs. BQA is trying to maintain control through PSRO.

The KFMC is hopeful that PSRO will eventually come out as the winner in this ballgame, because we believe that the physicians will have a greater degree of control over UR under PSRO.

Until the winner is declared, we will all observe this elongated seventh inning stretch and await a decision. It seems that everyone knows the game we are watching, but nobody knows the score.—*J.E.A.*

Letters to VOX DOX should be addressed to the Vox Dox Editor, Journal of the Kansas Medical Society, 1300 Topeka Avenue, Topeka, Kansas 66612.

Deafness

(Continued from page 168)

12. Mathog, R. H. and Klein, W. J.: Ototoxicity of ethacrynic acid and aminoglycoside antibiotics in uremia. *N. Eng. J. Med.* 280:1223-1224, 1969.

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15. Quick, C. A. and Duvall, A. J.: Early changes in the cochlear duct from ethacrynic acid: An electron microscope evaluation. *Laryngoscope* 80:954-965, 1970.

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KAFP ELECTS

The following new officers of the Kansas Academy of Family Physicians have been installed:

President:	Philip H. Hostetter, Manhattan
President-Elect:	Anol W. Beahm, Great Bend
Vice President:	F. Giles Freeman, Pratt
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ABFP EXAMINATIONS

The American Board of Family Practice will give its next two-day written certification examination on November 1-2, 1975. It will be held at five centers geographically distributed throughout the United States. Information regarding the examination may be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary
American Board of Family Practice, Inc.
University of Kentucky Medical Center
Annex #2, Room 229
Lexington, Kentucky 40506

Please Note: It is necessary for each physician desiring to take the examination to file a completed application with the Board office. Deadline for receipt of applications in this office is June 15, 1975.

Obituaries

O. W. DAVIDSON, M.D.

Dr. Oscar W. Davidson, of Kansas City, Kansas, died May 8, 1975, at the age of 77. He was born August 23, 1897, in Niles.

Dr. Davidson was graduated from the University of Kansas School of Medicine in 1926. He had practiced medicine in Kansas for over 48 years.

Dr. Davidson served as President of the Kansas Medical Society for the year 1948/49.

Surviving Dr. Davidson are his wife, a son, and two daughters.

R. O. HOWARD, M.D.

Dr. Robert O. Howard, 94, of Wichita, died April 18, 1975. He was born October 8, 1880, in Iola.

Dr. Howard was graduated from the Hahnemann Medical College of Chicago in 1903, and entered medical practice in Wichita in 1929.

Surviving Dr. Howard are a daughter and three sons.

CHARLES H. JOHNSON, M.D.

Dr. Charles H. Johnson, 63, of Shawnee Mission, died April 18, 1975. He was born May 30, 1911, in Kansas City, Kansas. He was graduated from the St. Louis University Medical School in 1936, and practiced medicine in Kansas since that time.

Surviving Dr. Johnson are his wife and two daughters.

FRANCIS J. NASH, M.D.

Dr. Francis J. Nash, of Kansas City, Kansas, died May 15, 1975, at the age of 63. He was born in Washington County, Kansas, on November 26, 1911.

Dr. Nash was graduated from the University of Kansas School of Medicine in 1939. Besides maintaining a private practice and serving as an instructor at KUMC, Dr. Nash served as the Secretary of the Kansas State Board of Healing Arts. He was the first secretary appointed to the board at its creation in 1957.

Surviving Dr. Nash are his wife and three daughters.

MIRL C. RUBLE, M.D.

Dr. Mirl C. Ruble, 79, of Cherryvale, died January 27, 1975. He was born in Parsons, October 23, 1895.

Having been graduated from the University of Kansas School of Medicine in 1920, Dr. Ruble practiced medicine in Kansas until his retirement in 1970.

Survivors include his wife and two daughters.

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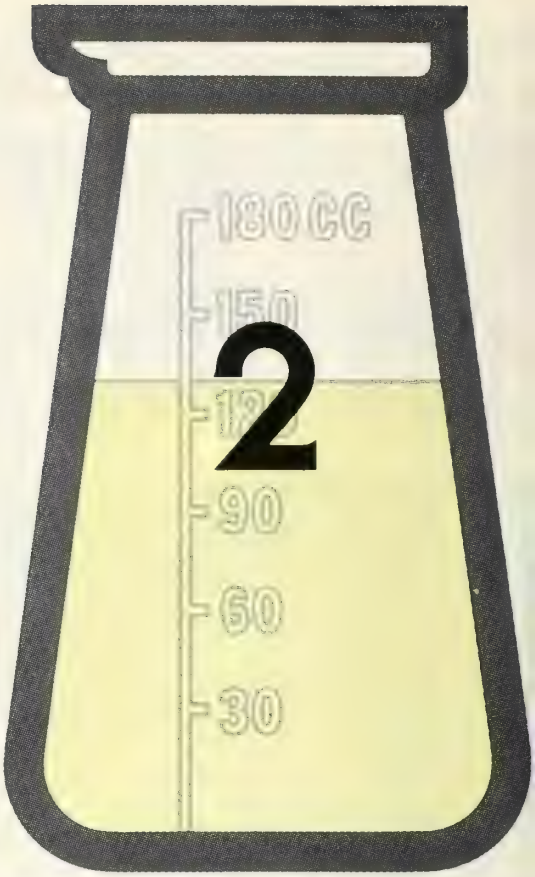
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Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

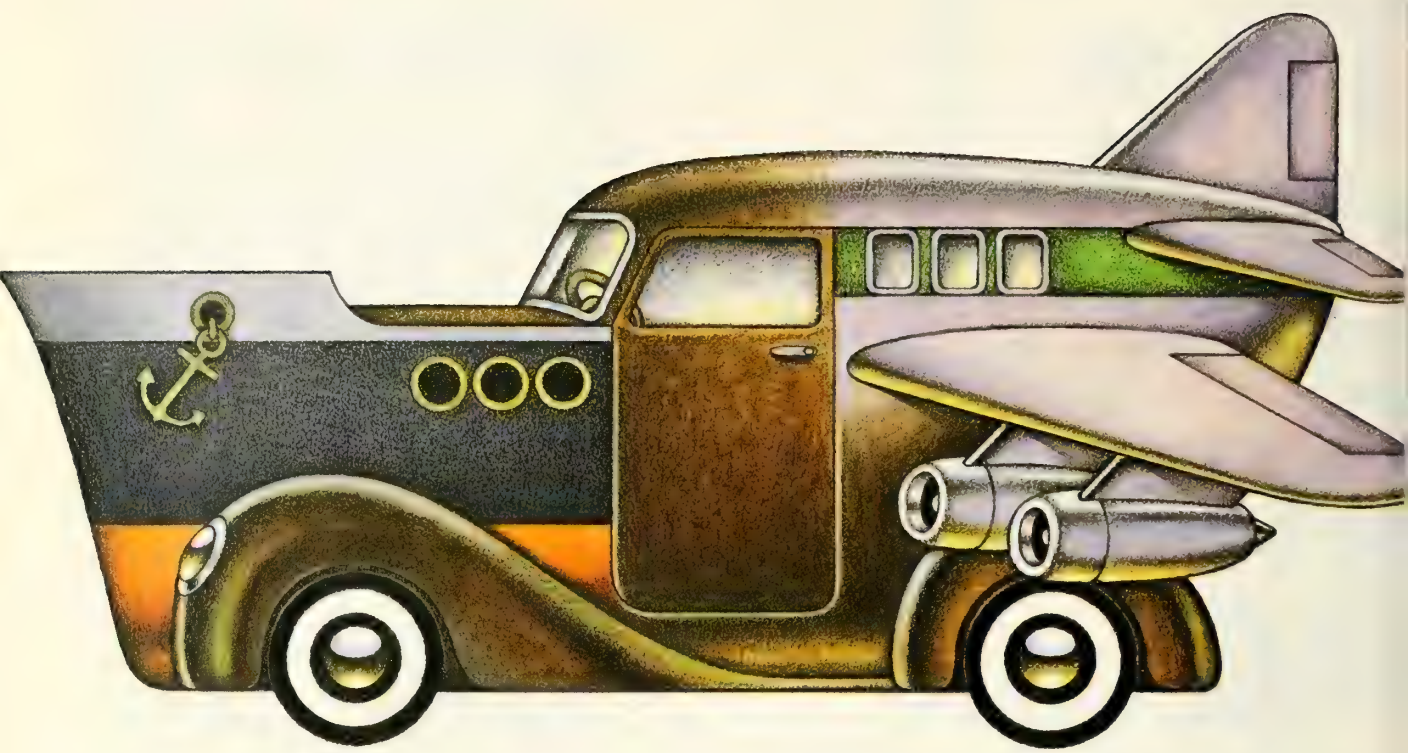
Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

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WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

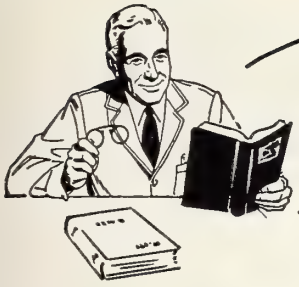
Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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Book REVIEWS

SYMPOSIUM ON RECONSTRUCTIVE HAND SURGERY, by J. William Littler, M.D., Lester M. Cramer, M.D. and James W. Smith, M.D. (Editors), The C. V. Mosby Co., St. Louis. 1974. 324 pages, illustrated. $42.50.

This book is Volume IX in a series coming out of the Educational Foundation of the American Society of Plastic and Reconstructive Surgery. The volume stresses basic principles of hand reconstruction and presents the newest, most advanced surgical techniques in hand surgery. It reports clinical experiences of more than 35 eminent hand surgeons. The volume is divided into nine parts ranging from basic architecture, functional anatomy, surgical considerations to techniques, and microsurgery. At the end of each part there is a discussion by many of the contributors.

In the chapter on the Basic Approach to the Injured Hand, a method is described which permits systematic evaluation and management of severe hand injuries. A concept of scar tissue formation and ultimate functional result is thoroughly discussed. In Part VII, there is a chapter on what is new, which discusses new subjects on prosthetic joints, new instruments, soft tissue wounds, nerve repair, and suture material. The last chapter deals with techniques in microsurgery. This is an especially rewarding section since it deals with the latest advances in microvascular and nerve repair. A discussion on digital reimplantation is also a highlight in this outstanding section. This volume on hand surgery will be of special interest to those individuals specializing in hand surgery. —*T.E.K.*

CLINICAL PERINATOLOGY, by Silvio Aladjem, M.D. and Audrey K. Brown, M.D. (Editors), The C. V. Mosby Co., St. Louis. 1974. 492 pages, 135 illustrations. $39.50.

This book contains the text of our current knowledge of the health and diseases of the fetus as seen by the perinatologist of 1974. It is well documented with an extensive bibliography to support the author's views and ideas. This bibliography can be used to take one back to the original article to see why we think what we do about certain aspects of care. Nineteen authorities with backgrounds in obstetrics and pediatrics have contributed different portions, and six of these are from countries outside the United States.

The subject matter includes changes in maternal physiology; the fetus as a patient, including amniocentesis; genetics as it affects the prediction of the likelihood of birth of a child, without birth defects; perinatal infections, pathology, and what we might expect to find from an autopsy on a baby; the placenta, and its function; the stress of labor, and fetal monitoring; how the fetus adjusts to these stresses; and finally what are the changes in neonatal morbidity and mortality figures that have come about because of the application of the principles of Neonatal Intensive Care. The chapters on Clinical Aspects of Placental Insufficiency and the Stress of Labor were difficult to read, and left one more confused about this aspect than other authors or speakers on this subject have in the past.

As a whole, the book did read well, and in the opinion of this reviewer it has value for the obstetrician because it presents the pediatric side of perinatology. —*W.T.K.*

EMERGENCY CARE, by Carmen W. Sproul, R.N. and Patrick J. Mullanney, M.D. (Editors), The C. V. Mosby Co., St Louis. 1974. 406 pages, 122 illustrations. $12.50.

The 374 pages of text were authored by 32 contributors. Although the major author is an R.N., most of the contributors are M.D.s. Therefore, the text should not be considered primarily for ambulance attendants or emergency room nurses, although it is useful in those areas. It is a text from which senior medical students, first-year residents, and even physicians practicing emergency medicine can benefit. Although its major use will be in training, it can be used as a refresher or basic text.

The chapters range from a general, over-all and somewhat philosophical view, of emergency medical care including trauma, shock and transfusion problems, to specific management of the unconscious, psychiatric, orthopedic, vascular, burn patients, and other trauma.

The chapter on the acute abdomen and abdominal

(Continued on page 12A)

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The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).



INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23261

Book Reviews

(Continued from page 9A)

injuries is somewhat limited in its scope, and does not go into the depth of trauma. Possibly the weakest chapter is the one on poisonous reptiles and insects; it contains incomplete information in several areas. The strongest chapter is on aquatic and medical emergencies by William L. Orris, M.D. Dr. Orris is an oceanographer, turned physician at age 41, and one of the authoritative people in the field of aquatic medicine in the country. The chapter on orthopedics is a good chapter and representative of the type of information disseminated in many sections of the book. It covers the various types of fractures and their management, evaluation of neurologic problems that frequently accompany fractures, and discusses the general and specific guidelines to be followed in emergency splinting.

Generally, the book is excellent. The few weak areas are strongly overshadowed by the excellent sections. A working knowledge of all the information available in the book is a necessity for anyone involved in emergency medicine. It is highly recommended.—*N.E.McS.*

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Information for Authors

Manuscript Preparation

Manuscripts must be typewritten, double spaced, leaving wide margins. Submit the original, plus one copy if possible.

Titles should be short, specific, and amenable to indexing. A subtitle is frequently used to keep the main title short.

Summary: All manuscripts should include a short abstract which is a factual (not descriptive) summary of the work.

Author Responsibility: The author is responsible for all statements made in his work, including changes made by the copy editor. Manuscripts are received with the explicit understanding that they are not simultaneously under consideration by any other publication. Publication elsewhere will be subsequently authorized at the discretion of the Editor.

Galley Proof: To make extensive changes in the article after the text has been set in type may require an additional cost which exceeds the original. The galley proof is for correction of ERRORS, and a rewriting of the article should be done on the original copy BEFORE it is submitted for publication.

Drugs should be called by their generic names; the trade names can be added in parentheses if they are considered important. All *units of measure* must be given in the metric system.

References

Bibliographic references should not exceed 20 in number, documenting key publications. Personal communications and unpublished data should not be included. References should be arranged according to the order of citation, and not alphabetically. All references must be numbered consecutively and all must be cited in the text. Use the style of the AMA publications, giving; name of author, title of article, name of periodical, volume, pages, year.

Illustrations

All material which cannot be set in type, such as photographs, line drawings, graphs, charts, tracings (for preparation of tables, see below) must be mounted on white cardboard. All must be identified on the back as to figure number, author's name, and an arrow indicating top. Legends should be typed double spaced on a separate sheet of paper, limited to a maximum of 30 words.

Drawings and graphs should be done professionally in India ink on illustration board or high grade white drawing paper.

Photographic material should be submitted in duplicate as high-contrast, glossy prints. Color illustrations will be accepted for publication only if the author assumes the cost.

THE JOURNAL will assume the cost of B/W engravings and cuts up to $35 (or 5 cuts). Engraving cost for illustrations in excess of $35 will be billed to the author.

Tables

Because tables are set by hand, their cost is comparable to illustrations. A reasonable number of tables are allowed without cost to the author.

Tables should be self-explanatory and should supplement, not duplicate, the text. Since the purpose of a table is to compare or classify related items, the data must be logically and clearly organized. The relationship and comparison are established by the correct choice of column heads (captions of vertical columns)and stubs (left entries in horizontal listings).

Each table should be typed double spaced, including all headings, on separate sheets of lettersize paper. Oversize paper should not be used. Instead, repeat heads and stubs on a second sheet for tables requiring extra width. Number tables consecutively. Each table must have a title.

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MANUSCRIPTS SOLICITED

The American Academy of Orthopaedic Surgeons is pleased to announce that manuscripts are earnestly solicited for the three Kappa Delta Awards of $2,000 each. Three awards will be given, providing manuscripts of requisite quality are submitted for outstanding contributions in the field of orthopaedic surgery from United States citizens, resident in the States or its Possessions. Awards will be made in the following three categories:

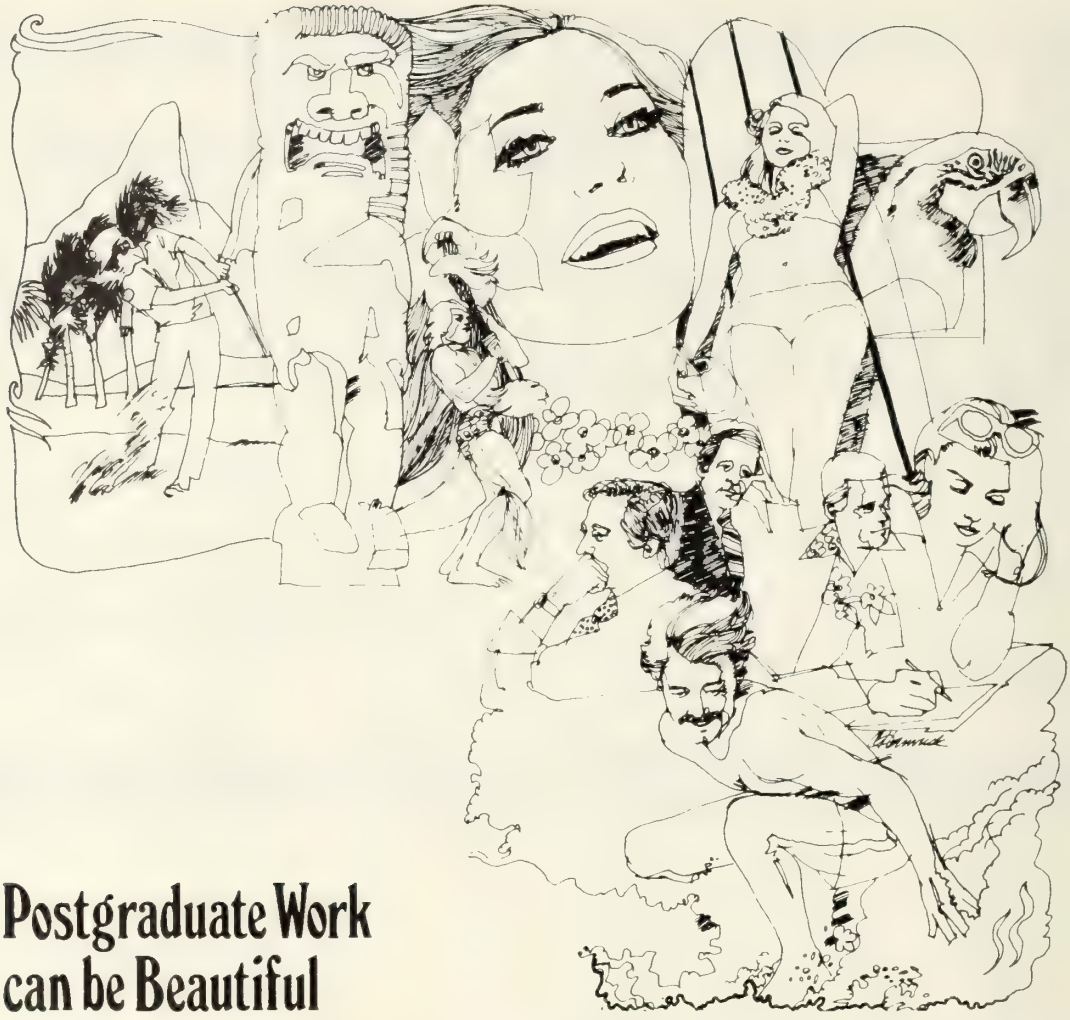
1. Basic research that relates to the musculoskeletal system.
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3. Problems related to trauma of the musculoskeletal system.

You are urged to submit any work which you have done which is eligible. The Committee on Research Awards of the Academy will also appreciate your bringing this information to the attention of anyone who may be engaged in a subject that would qualify. If at all feasible, at least one of these three awards will be given to a younger investigator (aged 40 or younger).

Papers to receive the awards will be selected during the current year from manuscripts presented to the Committee on Research Awards of the American Academy of Orthopaedic Surgeons before August 1, 1975. Appropriate places will be reserved on the 1976 program for the presentation of the award-winning papers.

Please submit six copies of abstracts or manuscripts to:

American Academy of Orthopaedic Surgeons
Advisory Committee on Research; Kappa Delta Awards
430 North Michigan Avenue
Chicago, Illinois 60611



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LIFESAVING PARTNERSHIP... AGAINST CANCER QUACKERY

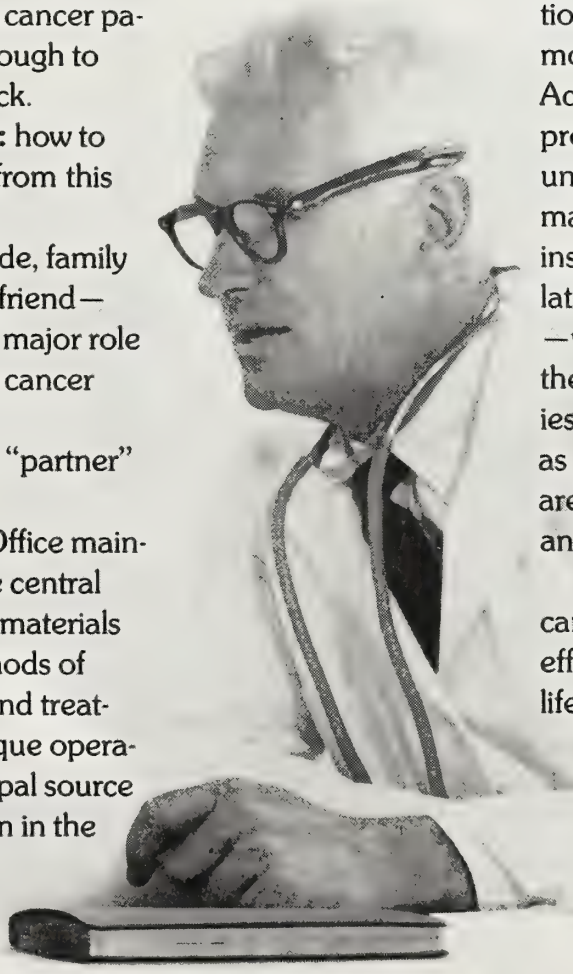
The anguish associated with cancer is compounded by the cancer quack. False hopes—harmful delays—shattering expenses—deceptive diagnoses—loss of life—these are hazards facing the cancer patient desperate enough to seek a cancer quack.

The problem: how to divert the patient from this tragic encounter.

As medical guide, family counselor, trusted friend—you, doctor, play a major role in the fight against cancer quackery.

We are here to "partner" you.

Our National Office maintains an up-to-date central clearing house for materials on unproven methods of cancer diagnosis and treatment. This is a unique operation and the principal source of such information in the country. Its services are widely used. Hundreds of inquiries are received and answered from all segments of the community, from coast to coast.



To trigger grass-roots action, we have formulated a model State Cancer Remedy Act designed to control the promotion and sale of unproven methods of cancer management. This has already inspired nine states to legislate against cancer quackery—with active support from the medical community. Copies of the model act, as well as copies of the laws in effect, are available in our National and Division offices.

In these actions against cancer quackery, as in all our efforts against cancer, ours is a lifesaving partnership.

American Cancer Society

THIS SPACE CONTRIBUTED BY THE PUBLISHER

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Gynecologist Wanted, board certified or board eligible. Multi-specialty medical group in Kansas City desires full time partner or part time assistants in hospital and clinical gynecology. Reply in confidence to Box 1-775, in care of JOURNAL.

Choice summer, fall and winter dates still available for the best vacation of your life in St. John, US Virgin Isands. Clean air and beaches and clean water for snorkeling, swimming, boating, and fishing. Angelo Lapi, MD, 101 Memorial Drive, Kansas City, Missouri 64108. Phone: (816) 753-5700; home (913) 362-4127.

Physician Needed: ENT or EENT, in Pratt; population 6,700; trade area population 32,000. Please contact: Oscar Barahona, Chamber of Commerce, P.O. Box 469, Pratt, Kansas 67124.

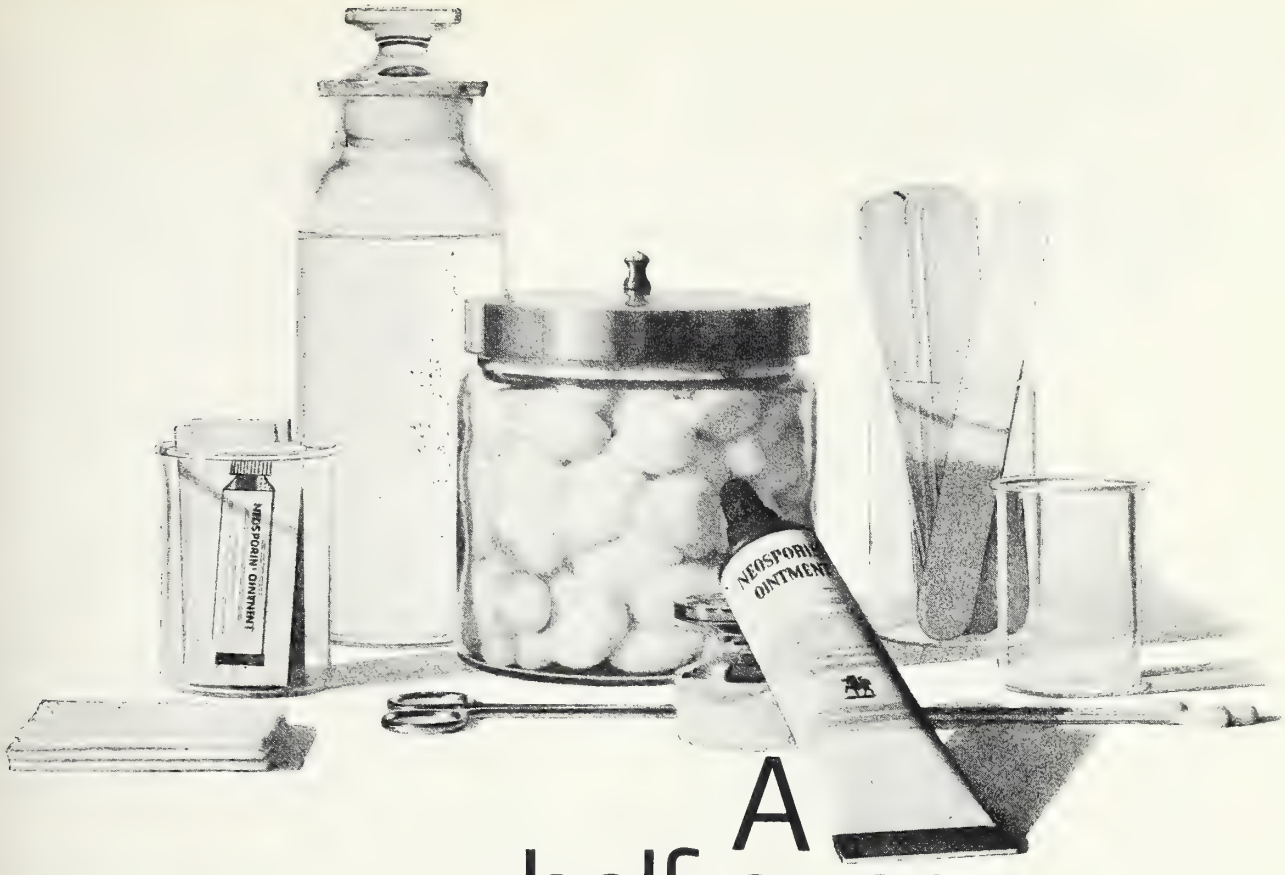
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Attend the

HOUSE OF DELEGATES MEETING

See p. 172 for details



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started. In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare. Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced. Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.
Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome / **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

makes sense



For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance. Hydrochlorothiazide to help keep blood pressure down and triamterene to help keep potassium levels up.

adjunctive therapy for wound debridement

HELPS TO REMOVE:

- Necrotic Tissue and Associated Odor

HELPS PREPARE WOUND FOR:

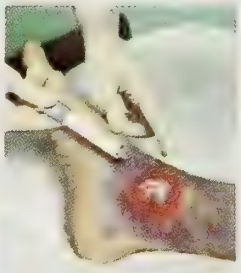
- Granulation/Healing
- Granulation/Grafting



CLEANSE WOUND
Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials.



THOROUGHLY MOISTEN
Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g., sodium chloride or water solutions).



APPLY ENZYME
Apply a layer of TRAVASE Ointment. Assure intimate contact with necrotic tissue and complete wound coverage.

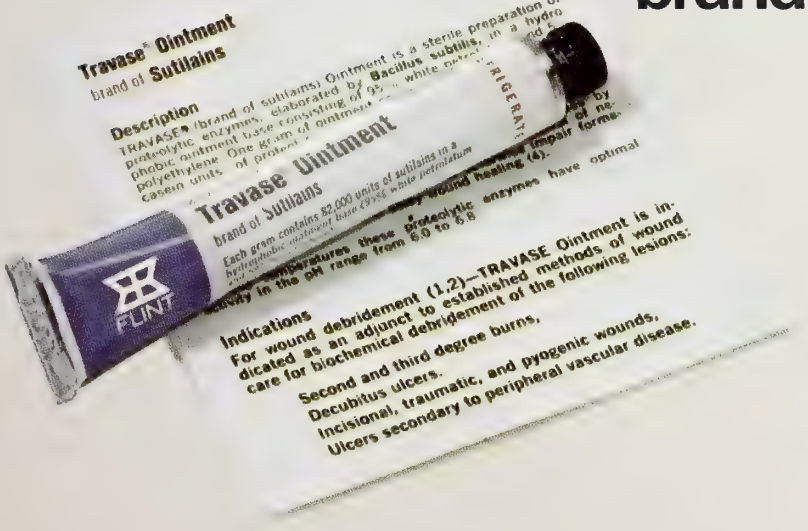


APPLY MOIST DRESSING
Apply loose moist dressings (most important with dry leathery eschar).



CHANGE DRESSINGS
When changing dressing, gently wipe away the dissolved material. Repeat the procedure, including application of TRAVASE Ointment, 3 to 4 times per day for best results.

Travase® Ointment
brand of Sutilains



FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Please see next page for prescribing information.

Travase® Ointment brand of Sutilains

ulcers

TERRY V. CARLE, M.D., CLINICAL INSTRUCTOR, DEPT. OF PHYS. MED. & REHAB ,
CRAIG REHABILITATION HOSPITAL, UNIVERSITY OF COLORADO



Before treatment, necrotic matter coated the inner surfaces of this decubitus ulcer.



After nine days of TRAVASE therapy, debridement is nearly complete and granulation evident.

burns

DALE B. DUBIN, M.D., DIPLOMATE,
AMERICAN BOARD OF PLASTIC SURGERY, TAMPA, FLORIDA



Before treatment . . .



48 hours following treatment with TRAVASE Ointment on right hand; left hand is control.

Travase® Ointment

(brand of Sutilains)

Indications: For wound debridement, TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:

- Second and third degree burns,
- Decubitus ulcers,
- Incisional, traumatic, and pyogenic wounds,
- Ulcers secondary to peripheral vascular disease.

Contraindications: Application of TRAVASE Ointment is contraindicated in the following conditions:

- Wounds communicating with major body cavities,
- Wounds containing exposed major nerves or nervous tissue,
- Fungating neoplastic ulcers,
- Wounds in women of child-bearing potential—because of lack of laboratory evidence of effects of TRAVASE upon the developing fetus.

Warning: Do not permit TRAVASE Ointment to come into contact with the eyes. If contact is made, immediately rinse with copious amounts of water, preferably sterile.

Precautions: A moist environment is essential to optimal activity of the enzyme. Enzyme activity may also be impaired by certain agents (see package insert). Although there have been no reports of systemic allergic reaction in humans, studies have shown that there may be an antibody response in humans to absorbed enzyme material.

Adverse Reactions: Consist of mild, transient pain, paresthesias, bleeding and transient dermatitis. Pain usually can be controlled by administration of mild analgesics. Side effects severe enough to warrant discontinuation of therapy occasionally have occurred.

If bleeding or dermatitis occurs as a result of the application of TRAVASE Ointment, therapy should be discontinued. No systemic toxicity has been observed as a result of the topical application of TRAVASE Ointment.

DOSAGE AND ADMINISTRATION: STRICT ADHERENCE TO THE FOLLOWING IS REQUIRED FOR EFFECTIVE RESULTS OF TREATMENT:

1. Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials which may denature enzyme or alter substrate characteristics (e.g., hexachlorophene, silver nitrate, benzalkonium chloride, nitrofurazone, etc.).
2. Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g. sodium chloride or water solutions).
3. Apply TRAVASE Ointment in a thin layer assuring intimate contact with necrotic tissue and complete wound coverage extending ¼ to ½ inch beyond the area to be debrided.
4. Apply loose wet dressings.
5. Repeat entire procedure 3 to 4 times per day for best results.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES INC
Deerfield, Illinois 60015

1975 Membership Directory

THE Journal of the Kansas Medical Society

AUGUST
1975

VOL. LXXVI
NO. VIII

Both often



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in freque and/or severity of grand mal seizures n require increased dosage of standard a convulsant medication; abrupt withdra may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous i gestion of alcohol and other CNS depre sants. Withdrawal symptoms (similar t those with barbiturates and alcohol) ha occurred following abrupt discontinuar (convulsions, tremor, abdominal and m cle cramps, vomiting and sweating). Ke addiction-prone individuals under care

respond to one

According to her major
y ptoms, she is a psychoneu-
oc patient with severe
riety. But according to the
le ription she gives of her
e ings, part of the problem
n sound like depression.
Tls is because her problem,
l ough primarily one of ex-
e ive anxiety, is often accom-
a ied by depressive symptom-
t ogy. Valium (diazepam)
a provide relief for both—as
h excessive anxiety is re-
e d, the depressive symp-
o s associated with it are also
f n relieved.

There are other advan-
a s in using Valium for the
n agement of psychoneu-
o c anxiety with secondary
e ressive symptoms: the
s chotherapeutic effect of
V ium is pronounced and
a d. This means that im-
r vement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

e illance because of their predisposi-
to habituation and dependence. In
nancy, lactation or women of child-
ing age, weigh potential benefit
nst possible hazard.

autions: If combined with other psy-
ropics or anticonvulsants, consider
fully pharmacology of agents em-
ed; drugs such as phenothiazines,
otics, barbiturates, MAO inhibitors
other antidepressants may potentiate
ction. Usual precautions indicated in
nts severely depressed, or with latent
ession, or with suicidal tendencies.
Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Volume LXXVI, Number 8—August, 1975

The JOURNAL of the KANSAS MEDICAL SOCIETY

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September 11 (Thursday)	*Hays*	Council Distr. 13	6:00 p.m.
12 (Friday)	*Colby*	Council Distr. 16	6:00 p.m.
14 (Sunday)	*Dodge City*	Council Distr. 15 & 17	12:00 noon (luncheon)
	Dodge City	Executive Committee	2:00 p.m.
October 19 (Sunday)	*Manhattan*	Executive Committee	10:30 a.m.
	Manhattan	Council Distr. 5	12:00 noon (luncheon)
	Manhattan	Council	1:30 p.m.
20 (Monday)	*Salina*	Council Distr. 9 & 10	6:00 p.m.
November 4 (Tuesday)	*Wichita*	Council Distr. 11	6:00 p.m.
16 (Sunday)	*Lawrence*	House of Delegates	9:00 a.m.
	Lawrence	Council Distr. 18	12:00 noon (luncheon)
18 (Tuesday)	*Kansas City*	Council Distr. 2 & 3	6:00 p.m.
November 28-December 6	*Hawaii*	AMA Clinical Session	
December 12 (Friday)	*Pratt*	Executive Committee	5:30 p.m.
	Pratt	Council Distr. 12 & 14	7:00 p.m. (dinner)
January 5 (Monday)	*Topeka*	Council Distr. 6	6:00 p.m.
18 (Sunday)	*Emporia*	Executive Committee	10:30 a.m.
	Emporia	Council Distr. 7	12:00 noon (luncheon)
	Emporia	Council	1:30 p.m.
February 20 (Friday)	*Topeka*	Executive Committee	6:30 p.m.
22 (Sunday)	*Topeka*	Auxiliary Officers	
March 21 (Sunday)	*Wichita*	Commissions	10:00 a.m.
	Wichita	Executive Committee	1:30 p.m.
April 11 (Sunday)	*Great Bend*	Executive Committee	10:30 a.m.
	Great Bend	Council	1:30 p.m.
May 2-5	*Salina*	117th Annual Session	



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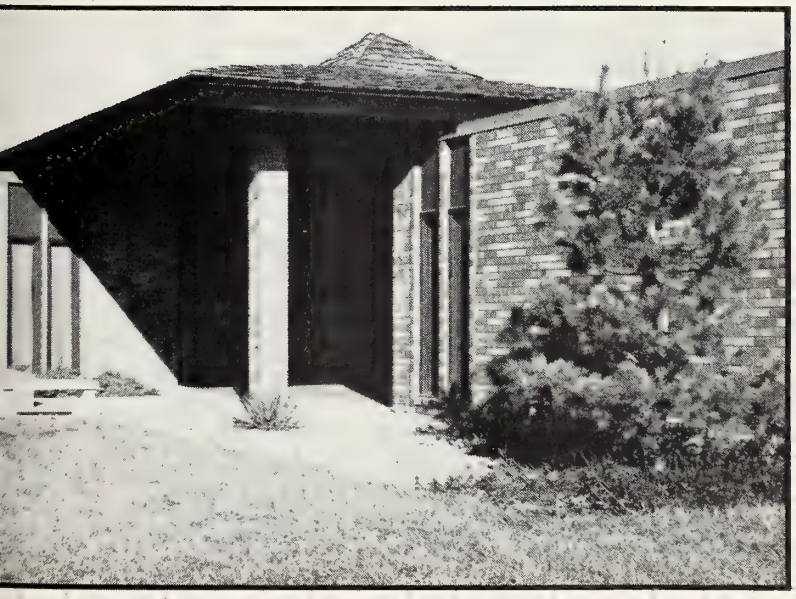
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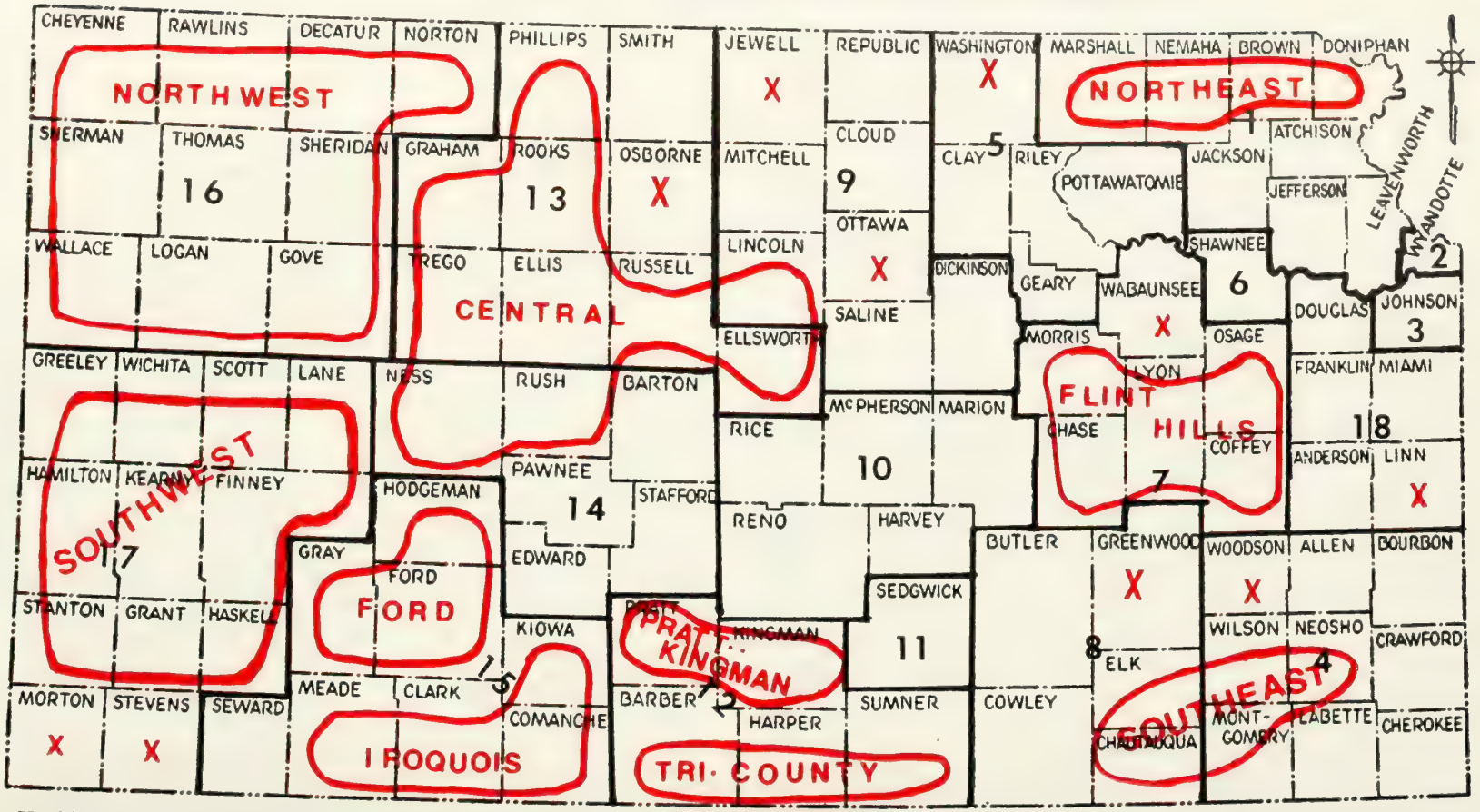


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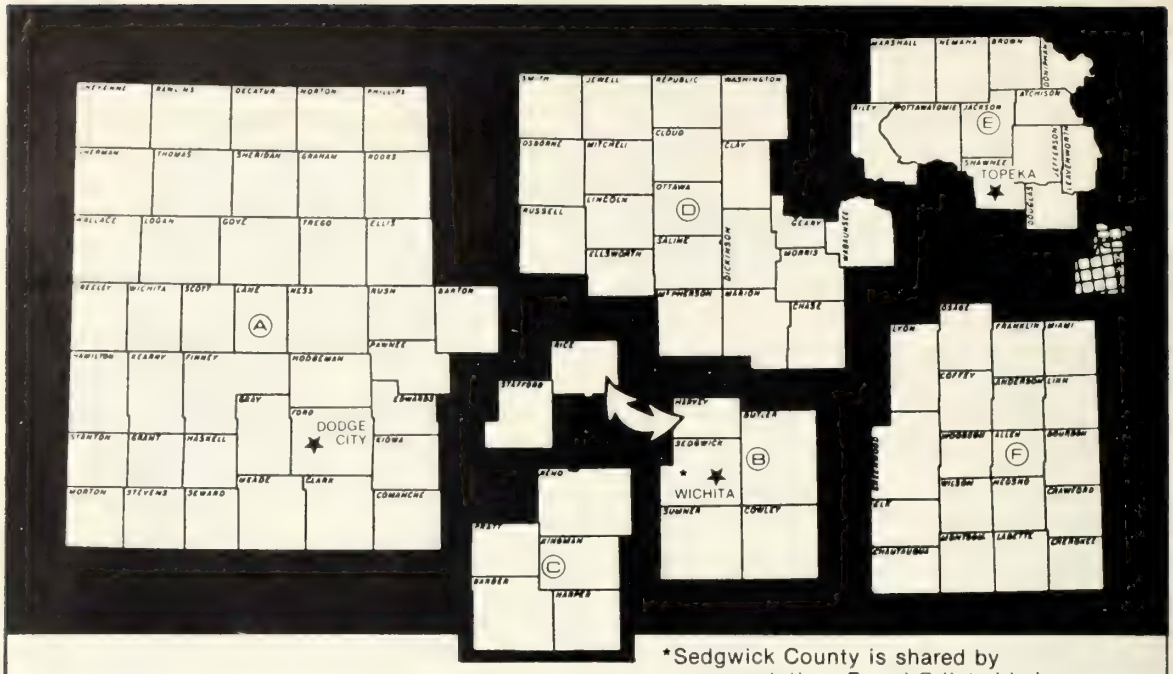
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CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

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Abilene—Memorial Hospital—913/263-2100
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Chanute—Neosho Memorial Hospital—316/431-4000
Clay Center—Clay County Hospital—913/632-2144
Coffeyville—Coffeyville Memorial Hospital—316/251-1200
Colby—St. Thomas Hospital—913/462-3335
Coldwater—Comanche County Hospital—316/582-2144
Columbus—Maude Norton Memorial City Hospital—316/429-2545
Concordia—St. Joseph's Hospital—913/243-1234
Council Grove—Morris County Hospital—316/767-5151
Dighton—Lane County Hospital—316/397-5321
Dodge City
Trinity Methodist Hospital—316/227-8133
ElDorado—Susan B. Allen Memorial Hospital—316/321-3300
Elkhart—Morton County Hospital—316/697-2141
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Emporia—Newman Memorial Hospital—316/342-
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Eureka—Greenwood County Hospital—316/443-5541
Fort Scott—Mercy Hospital—316/223-2200
Fowler—Fowler Community Hospital—316/646-5281

Fredonia—St. Margaret's Mercy Hospital—316/378-2121
Garden City—St. Catherine Hospital—316/276-8711
Gardner—Gardner Comm. Med. Center—913/884-5115
Garnett—Anderson County Hospital—913/448-3131
Girard—Hospital District #1, Crawford County—316/724-8291
Goessel—Mennonite Bethesda Hospital—316/367-2201
Goodland—NW Kansas Medical Center—913/899-2358
Great Bend—Central Kansas Medical Center—316/792-2511
Greensburg—Kiowa County Memorial Hospital—316/723-2161
Halstead—Halstead Hospital—316/835-2247
Hanover—Washington County District #1—913/337-2214
Harper—Harper County District #5—316/896-3241
Hays
Hadley Regional Med. Center—913/625-3441
St. Anthony Hospital—913/625-2556
Herington—Herington Municipal Hospital—913/258-2207
Hiawatha—Hiawatha Community Hospital—913/742-2131
Hill City—Graham County Hospital—913/674-2121
Hillsboro—Salem Hospital—316/947-3114
Hoisington—Hoisington Lutheran Hospital—316/653-2114
Holton—Holton City Hospital—913/364-2116
Horton—Horton Community Hospital—913/486-2142
Hoxie—Sheridan County Hospital—913/675-3281
Hugoton—Stevens County Hospital—316/544-2233
Hutchinson
Grace Hospital—316/663-4411
St. Elizabeth's Mercy Hospital—316/665-5531
Independence—Mercy Hospital—316/331-2200
Iola—Allen County Hospital—316/365-3131
Jetmore—Hodgeman County Hospital—316/2811
Johnson—Stanton County Hospital—316/492-6611
Junction City—Geary Community Hospital—913/238-4131
Kansas City
Bethany Hospital—913/621-6600
Douglass Hospital—913/371-1782
Providence Hospital—913/621-5335
St. Margaret Hospital—913/621-0700
Univ. of Ks. Med. Ctr.—913/831-5000
Kingman
Kingman Community Hospital—316/532-3184
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Kiowa—Kiowa District Hospital—316/825-4130
LaCrosse—Rush County Hospital—913/222-2545
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Larned
St. Joseph Memorial Hospital—316/285-3161
Gleason Hospital—316/285-3136
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Lawrence Memorial Hospital—913/843-3680
Watkins Memorial Hospital—913/843-4455
Leavenworth
Cushing Memorial Hospital—913/682-8000
St. John's Hospital—913/682-3721
Leoti—Wichita County Hospital—316/375-2233
Liberal—Southwest Medical Center—316/624-1651
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Manhattan
Lafene Student Health Ctr., KSU—913/532-6811
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Mankato—Jewell County Hospital—913/378-3137
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Minneola—Minneola District Hospital—316/885-4264
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Neodesha—Wilson County Hospital—316/325-2611
Ness City—Ness County District #2—913/798-2291
Newton
Axtell Christian Hospital—316/283-5200
Bethel Deaconess—316/283-2700
Prairie View Hospital—316/283-2400
Norton
Norton County Hospital—913/927-3351
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MKT Railroad Employees' Hosp.—316/421-2700
Phillipsburg—Phillips County Hospital—913/543-5226
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Seneca—Seneca Hospital—913/336-2181
Shawnee Mission—Shawnee Mission Hospital—913/831-8500
Smith Center—Smith County Memorial Hospital—913/282-6661
Spearville—Spearville District Hospital—316/385-2662
Stafford—Stafford District Hospital—316/234-5221
Sterling—Sterling Community Hospital—316/278-2121
Sublette—Sublette Community Hospital—316/675-2241
Syracuse—Hamilton County Hospital—316/384-7461
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AT & SF Memorial Hospital—913/233-2361
The Menninger Foundation—913/234-9566
St. Francis Hospital—913/354-8411
Stormont-Vail Hospital—913/234-9961
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WaKeeney—Trego County-Lemke Memorial Hospital—913/743-2134
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St. Joseph Hosp. & Rehab. Ctr.—316/685-1111
Salvation Army Booth Mem. Hosp.—316/363-6174
Sedgwick County Hospital—316/268-8421
Wesley Medical Center—316/685-2151
Winchester—Jefferson County Memorial Hospital—913/774-4340
Winfield—William Newton Memorial Hospital—316/221-2300

STATE INSTITUTIONS

Atchison—Kansas Children's Receiving Home—913/367-6590
Beloit—Girls' Industrial School—913/738-3571
Chanute—SE Kansas Tuberculosis Hospital—316/431-9500
Larned—Larned State Hospital—316/285-2131
Norton—Norton State Hospital—913/927-3301
Osawatomie—Osawatomie State Hospital—913/755-3151
Parsons—Parsons State Hospital & Training Center—316/421-6550
Topeka
Boys' Industrial School—913/296-7709
Kansas Neurological Institute—913/296-5401
Topeka State Hospital—913/296-4596
Winfield—Winfield State Hospital & Training Center—316/221-1200

VETERANS AND MILITARY HOSPITALS

Ft. Leavenworth—Munson Army Hospital—913/684-4021
Ft. Riley—Irwin U. S. Army Hospital—913/239-3663
Topeka
Veterans Administration Hospital—913/233-6411
Wadsworth—Veterans Administration Hospital—913/682-2000
Wichita
USAF Hospital—316/685-9254
Veterans Administration Hospital—316/685-2221

POISON CONTROL CENTERS

Atchison—Atchison Hospital—913/367-2131
Dodge City—Trinity Hospital—316/483-8133
Emporia—Newman Memorial Hospital—316/342-7120

Fort Scott—Mercy Hospital—Day: 316/223-3100; Night: 316/223-2200

Great Bend—Central Kansas Medical Center—Day: 316/793-3523; Night: 316/792-2511

Hays—Hadley Memorial Hospital—Day: 913/625-2515, Ext. 237; Night: 913/625-3441

Kansas City

University of Kansas Medical Center—913/831-6633

Bethany Hospital—913/621-6600

Lawrence—Lawrence Memorial Hospital—Day: 913/843-3680 or 842-4477; Night: 913/843-5874

Parsons—Labette County Medical Center—316/421-4880

Salina—St. John's Hospital—913/827-5591, Ext. 222

Topeka—Stormont-Vail Hospital—913/234-9961, Ext. 161 or 150

Wichita—Wesley Hospital—316/685-2151, Ext. 377

Kansas Poison Control Information Center:

Kansas Department of Health, Food and Drug Division, Topeka—Evan Wright, Director—913/296-3708

HOME HEALTH AGENCIES

Anderson County Hospital, Garnett 60032—913/-448-3131

Barton County Health Dept., Courthouse, Great Bend 67530—316/793-7879

Butler-Greenwood County Health Dept., Courthouse, El Dorado 67042—316/321-3400

Clay County Hospital, Clay Center 67432—913/632-2144

Cloud County Health Dept., Courthouse, Concordia 66901—913/243-3588

Coffey County Heath Dept., Courthouse, Burlington 66839—316/364-5831

Douglas County Visiting Nurses' Association, 342 Missouri St., Lawrence 66044—913/843-3738

Ellis County-St. Anthony Hospital, Hays 67601—913/625-2556

Ellsworth County Health Dept., Courthouse, Ellsworth 67439—913/472-4234

Ford County Health Dept., Courthouse, Dodge City 67801—316/225-4991

Franklin County Health Dept., 112 W. Tecumseh, Ottawa 66067—913/242-1873

Graham County Hospital, Hill City 67642—913/674-2121

Harper County Health Dept., Courthouse, Anthony 67003—316/842-5264

Harvey County Health Dept., Courthouse, Newton 67114—316/283-1060

Jackson County Health Dept., Courthouse, Holton 66436—913/364-2670

Jefferson County Health Dept., Courthouse, Oskaloosa 66066—913/863-2447

Kansas City Visiting Nurses' Association, One Gateway Center, Suite 219, Kansas City, Kansas 66117—913/371-3770

Kingman County Health Dept., Courthouse, Kingman, 67068—316/532-2221

Labette County Health Dept., Box 786, Parsons 67357—316/421-4350

Logan County Hospital, Oakley 67748—913/672-3211

Lyon County Home Health Service, Newman Memorial Hospital, Emporia 66801—316/342-8562

McPherson County Health Dept., Courthouse, McPherson 67460—316/241-1753

Morris County Health Dept., Courthouse, Council Grove 66846—316/767-5175

Osage County Health Dept., Courthouse, Lyndon 66451—913/828-3281

Pratt County Health Dept., 106 E. 2nd, Pratt 67124—316/672-6122

Reno County-St. Elizabeth Hospital, 500 W. 20th, Hutchinson 67501—316/665-5531

Republic County Health Dept., Courthouse, Belleville 66935—913/527-5385

Rice County Health Dept., Courthouse, Lyons 67554—316/257-2171

Riley County Health Dept., 616 Poyntz, Manhattan 66502—913/776-9721

Russell County Health Dept., Courthouse, Russell 67665—913/483-2641

Salina-Saline County Health Dept., 300 W. Ash, Salina 67401—913/827-9376

Sedgwick County Health Dept., 1900 E. 9th, Wichita 67214—316/268-8433

Shawnee County Health Dept., 1615 W. 8th, Topeka 66606—913/233-8961

Sheridan County Hospital, Hoxie 67740—913/675-3281

Thomas County-St. Thomas Hospital, Colby 67701—913/462-3335

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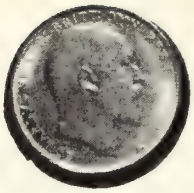
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ARKANSAS
- 401 UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE, Little Rock

CALIFORNIA
- 502 UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE, San Francisco
- 506 UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE, Los Angeles
- 511 STANFORD UNIVERSITY SCHOOL OF MEDICINE, Palo Alto
- 512 LOMA LINDA UNIV. SCHOOL OF MEDICINE, Loma Linda-Los Angeles

COLORADO
- 702 UNIVERSITY OF COLORADO SCHOOL OF MEDICINE, Denver

CONNECTICUT
- 801 YALE UNIVERSITY SCHOOL OF MEDICINE, New Haven

DISTRICT OF COLUMBIA
- 1001 GEORGE WASHINGTON UNIV. SCHOOL OF MEDICINE, Washington
- 1002 GEORGETOWN UNIVERSITY SCHOOL OF MEDICINE, Washington
- 1003 HOWARD UNIVERSITY COLLEGE OF MEDICINE, Washington

FLORIDA
- 1102 University of Miami School of Medicine, Coral Gables
- 1103 University of Florida College of Medicine, Gainesville

GEORGIA
- 1201 MEDICAL COLLEGE OF GEORGIA, Augusta
- 1205 EMORY UNIVERSITY SCHOOL OF MEDICINE, Atlanta

ILLINOIS
- 1601 Rush Medical College, Chicago
- 1602 UNIVERSITY OF CHICAGO SCHOOL OF MEDICINE
- 1604 The Hahnemann Medical College and Hospital, Chicago
- 1606 NORTHWESTERN UNIVERSITY MEDICAL SCHOOL, Chicago
- 1611 UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE, Chicago
- 1622 Chicago College of Medicine and Surgery
- 1642 CHICAGO MEDICAL SCHOOL
- 1643 LOYOLA UNIVERSITY STRITCH SCHOOL OF MEDICINE, Chicago

INDIANA
- 1720 INDIANA UNIVERSITY SCHOOL OF MEDICINE, Indianapolis

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- 1803 UNIVERSITY OF IOWA COLLEGE OF MEDICINE, Iowa City
- 1806 Drake University College of Medicine, Des Moines
- 1810 Keokuk Medical College, College of Physicians and Surgeons
- 1875 College of Osteopathic Medicine and Surgery, Des Moines

KANSAS
- 1902 UNIVERSITY OF KANSAS SCHOOL OF MEDICINE, Kansas City
- 1903 Kansas Medical College, Topeka
- 1904 College of Physicians and Surgeons, Kansas City

KENTUCKY
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- 2005 Hospital College of Medicine, Louisville
- 2012 UNIVERSITY OF KENTUCKY COLLEGE OF MEDICINE, Lexington

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- 2307 JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE, Baltimore

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- 2405 BOSTON UNIVERSITY SCHOOL OF MEDICINE
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2835 Southwest School of Medicine and Hospital, Kansas City
2840 Kansas City College of Osteopathy
2843 Kansas City College of Medicine and Surgery

NEBRASKA
3005 UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE, Omaha
3006 CREIGHTON UNIVERSITY SCHOOL OF MEDICINE, Omaha
3007 Nebraska College of Medicine, Lincoln

NEW MEXICO
3401 University of New Mexico School of Medicine, Albuquerque

NEW YORK
3501 COLUMBIA UNIV. COLL. OF PHYSICIANS AND SURGEONS, New York
3503 ALBANY MEDICAL COLLEGE OF UNION UNIVERSITY, Albany
3506 STATE UNIVERSITY OF NEW YORK AT BUFFALO SCHOOL OF MED.
3508 STATE UNIV. OF N. Y. DOWNSTATE MED. CENT., New York-Brooklyn
3509 NEW YORK MEDICAL COLLEGE, New York
3510 Bellevue Hospital Medical College, New York
3515 STATE UNIV. OF NEW YORK UPSTATE MEDICAL CENTER, Syracuse
3519 NEW YORK UNIVERSITY SCHOOL OF MEDICINE, New York
3520 CORNELL UNIVERSITY MEDICAL COLLEGE, New York
3545 UNIV. OF ROCHESTER SCHOOL OF MEDICINE AND DENTISTRY
3546 ALBERT EINSTEIN COLLEGE OF MEDICINE OF YESHIVA UNIVERSITY, New York

NORTH CAROLINA
3601 UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE, Chapel Hill
3605 BOWMAN GRAY SCH. OF MED. OF WAKE FOREST COLL., Winston-Salem
3607 DUKE UNIVERSITY SCHOOL OF MEDICINE, Durham

NORTH DAKOTA
3701 UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE, Grand Forks

OHIO
3802 Eclectic Medical College, Cincinnati
3806 WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE, Cleveland
3840 OHIO STATE UNIVERSITY COLLEGE OF MEDICINE, Columbus
3841 UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE

OKLAHOMA
3901 UNIVERSITY OF OKLAHOMA SCHOOL OF MEDICINE, Oklahoma City

OREGON
4002 UNIVERSITY OF OREGON MEDICAL SCHOOL, Portland

PENNSYLVANIA
4101 UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE, Philadelphia
4102 JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA
4107 WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA, Philadelphia
4109 HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA
4112 UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE
4113 TEMPLE UNIVERSITY SCHOOL OF MEDICINE, Philadelphia

Puerto Rico
4201 University of Puerto Rico School of Medicine, San Juan

South Carolina
4501 MEDICAL COLLEGE OF SOUTH CAROLINA, Charleston

Tennessee
4705 VANDERBILT UNIVERSITY SCHOOL OF MEDICINE, Nashville
4706 UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, Memphis
4707 MEHARRY MEDICAL COLLEGE, Nashville

Texas
4802 UNIVERSITY OF TEXAS MEDICAL BRANCH, Galveston
4804 BAYLOR UNIVERSITY COLLEGE OF MEDICINE, Houston
4812 UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL SCHOOL, Dallas

Utah
4901 UNIVERSITY OF UTAH COLLEGE OF MEDICINE, Salt Lake City

Vermont
5002 UNIVERSITY OF VERMONT COLLEGE OF MEDICINE, Burlington

Virginia
5101 UNIVERSITY OF VIRGINIA SCHOOL OF MEDICINE, Charlottesville
5104 MEDICAL COLLEGE OF VIRGINIA, Richmond

Washington
5404 UNIVERSITY OF WASHINGTON SCHOOL OF MEDICINE, Seattle

West Virginia
5501 West Virginia University School of Medicine, Morgantown

Wisconsin
5605 UNIVERSITY OF WISCONSIN MEDICAL SCHOOL, Madison
5606 MARQUETTE UNIVERSITY SCHOOL OF MEDICINE, Milwaukee

FOREIGN SCHOOLS

Argentina
13201 Facultad de Ciencias Medicas de la Universidad de Buenos Aires, Buenos Aires
13204 Facultad de Ciencias Medicas, Farmacia y Ramos Menores de la Universidad Nacional del Litoral, Rosario, Santa Fe
13205 Facultad de Medicina de la Universidad Nacional de Tucuman, Tucuman

Australia
14303 Faculty of Medicine University of Sydney, Sydney, New South Wales

Austria
15401 Medizinische Fakultat der Universitat Graz, Graz
15407 Medizinische Fakultat der Universitat Wein, Wein

Brazil
18704 Faculdade de Medicina da Universidade de Sao Paulo, Sao Paulo, Sao Paulo

CANADA

Alberta
6001 University of Alberta Faculty of Medicine, Edmonton

British Columbia
6101 University of British Columbia Faculty of Medicine, Vancouver

Manitoba
6201 University of Manitoba Faculty of Medicine, Winnipeg

Ontario
6501 University of Toronto Faculty of Medicine, Toronto

Quebec
6701 McGill University Faculty of Medicine, Montreal

Chile
23101 Facultad de Medicina de la Universidad de Chile, Santiago

China
24203 National Peking University, Peking
24209 St. John's University, Shanghai, Kiangsu (Extinct)
24216 National College of Medicine of Shanghai, Shanghai
24217 West China Union University School of Medicine, Chengtu

24222 Aurora University French School of Medicine, Shanghai
24239 Shansi University Medical College, Taiyuan, Shansi
24338 National Honan University Medical College, Kaifeng, Honan (24238 Prior to 1-1-71)

Colombia

26401 Facultad de Medicina de la Universidad Nacional de Colombia Cuidad Universitaria, Bogota, Cundinamarca
26402 Facultad de Medicina de la Universidad de Cartagena, Cartagena, Bolivar
26404 Facultad de Medicina de la Pontificia Universidad Javeriana, Bogota, Cundinamarca

Cuba

27501 Facultad de Medicina de la Universidad de la Habana, La Habana

Czechoslovakia

28602 Fakulta Vseobackeno Lekarstvi Karlova Universita, Katerinska, Praha

Ecuador

31901 Facultad de Ciencias Medicas de al Universidad Central, Quito

Egypt (United Arab Republic)

33002 Kasr-el-Aini-Faculty of Medicine Cairo University, Cairo (Formerly Fouad First University Faculty of Medicine)
33003 Faculty of Medicine Alexandria University, Alexandria

England

35204 University of Newcastle-upon-Tyne, The Medical School
35205 School of Medicine University of Leeds, Leeds
35207 University of London Faculty of Medicine, London (g) St. Georges Hospital Medical School
35211 Registrable Qualification granted by English Conjoint Board

Formosa (Taiwan)

38502 College of Medicine National Taiwan University, Taipei
38503 National Defense Med. Center, Taipei, Taiwan

France

39604 Faculte de Medecine de Montpellier Rue de l'Ecole-de-Medecine, Montpellier, Herault
39606 Faculte de Medecine de l'Universite de Paris, Paris, Seine

Germany

40701 Friedrich-Wilhelms-Universitat Medizinische Fakultat, Berlin, Prussia
40707 Medizinische Fakultat der Georg-August-Universitat, Gottingen, Niedersachsen
40710 Medizinische Fakultat der Universitat Heidelberg, Heidelberg, Baden-Wurttemberg
40716 Medizinische Fakultat der Ludwig-Maximilians-Universitat, Munchen, Bayern
40721 Medizinische Fakultat der Universitat Hamburg, Hamburg, Hamburg
40723 Medizinische Fakultat der Johann-Wolfgang-Goethe-Universitat, Frankfurt am Main, Hessen
40726 Medizinische Fakultat der Universitat, Wien, Wien

Greece

41802 Faculty of Medicine University of Thessaloniki, Thessaloniki

Honduras

45101 Facultad de Medicine y Cirugia de la Universidad Nacional Autonoma de Honduras, Tegucigalpa

Hungary

47301 Orvosi Fakultas Tudomanyegyetem, Budapest
47302 Orvosi Fakultas Szegedi Orvostudomanyi Egyetem, Szeged

India

49501 University of Bombay, Affiliated Medical Colleges: (b) Seth Gorhandas Sunderdas Medical College Bombay University, Bombay, Maharashtra
49504 Madras Medical College Madras University, Madras, Madras
49508 Christian Medical College Punjab University, Ludhiana, Punjab
49509 St. John's Medical College, Bangalore, Mysore (before June 1966: Government Medical College, Mysore University, Mysore)
49511 Andhra Medical College Andhra University, Visakhapatnam, Andhra
49516 Stanley Medical College Madras University, Madras, Madras
49521 Osmania Medical College Osmania University, Hyderabad, Andhra

49522 B.J. Medical College Gujarat University, Ahmedabad, Gujarat
49523 Medical College Baroda University, Baroda, Gujarat
49527 Christian Medical College, Vellore, Madras
49528 Byramjee Jeejeebhoy Medical College, Poona, Maharashtra
49529 Government Medical College Punjab University, Patiala, Punjab
49530 Sawai Man Singh Medical College Rajasthan University, Jaipur, Rajasthan
49531 Medical College Kerala University, Trivandrum, Kerala
49534 Gajra Rajo Medical College Vikram University, Gwalior Madhya Pradesh
49536 All-India Institute of Medical Sciences, New Delhi, Delhi
49541 G.S.V. Memorial Medical College Lucknow University, Kampur, Uttar Pradesh
49549 Gandhi Medical College Vikram University, Bhopal, Madhya Pradesh
49555 Sardar Patel Medical College, Bikaner, India

Iran

51701 Faculty of Medicine University of Teheran, Teheran

Iraq

52801 Faculty of Medicine Baghdad University, Baghdad

Ireland

53902 National University of Ireland, Constituent Colleges are:
a. Faculty of Medicine University College, Dublin
b. Faculty of Medicine University College, Cork
c. Faculty of Medicine, Galway
53906 Registrable Qualification granted by the Royal College of Physicians of Ireland and Royal College of Surgeons in Ireland

Italy

56114 Falcolta di Medicina e Chirurgia dell'Universita di Parma, Parma
56115 Facolta di Medicina e Chirurgia dell'Universita di Perugia, Perugia
56117 Facolta di Medicinia e Chirurgia dell'Universita di Roma, Roma
56119 Facolta di Medicina e Chirurgia dell'Universita di Siena, Siena

Japan

57211 Tokyo Medical College (Nippon Ikadaigaku) Hongo, Tokyo (Extinct)
57220 School of Medicine Keio Gijuku University, Tokyo, Tokyo

Korea

58301 Severance Medical College Yonsei University, Seoul
58302 College of Medicine Seoul National University, Seoul

Lebanon

60501 Medical School American University of Beirut, Beirut

Lithuania

61601 Vytauta Didziojo Universiteto Medicinos Fakelteto, Kaunas (Extinct)

Mexico

64901 Facultad de Medicina de la Universidad Nacional Autonoma de Mexico, Mexico
64902 Facultad de Medicina de la Universidad de Nuevo Leon, Monterrey, Nuevo Leon
64904 Facultad de Medicina de la Universidad Autonoma de San Luis Potosi, San Luis Potosi, San Luis Potosi
64906 Facultad de Medicina de la Universidad Nacional del Sureste, Merida, Yucatan
64908 Escuela Libre de Homeopatia de Mexico, Mexico
64914 Facultad de Medicina de la Universidad Autonoma de Guadalajara, Guadalajara, Jalisco

Pakistan

70401 King Edward Medical College, Lahore, West Pakistan
70403 Dacca Medical College, Dacca, East Pakistan
70409 Khyber Medical College, Peshawar, Northwest Frontier Province

Paraguay

72601 Facultad de Medicina de la Universidad Nacional de a Asuncion, Asuncion

Philippines

74801 Faculty of Medicine and Surgery University of Santo Tomas, Manila
74802 College of Medicine, Univ. of the Philippines, Manila
74807 College of Medicine, Manila Central University, Manila
74808 Institute of Medicine Far Eastern University, Manila
74809 College of Medicine Southwestern University, Cebu City
74810 College of Medicine University of the East, Quezon City

SCOTLAND
80301 Faculty of Medicine University of Aberdeen, Aberdeen
80303 Faculty of Medicine University of Edinburgh, Edinburgh
80305 Faculty of Medicine University of Glasgow, Glasgow

SOUTH AFRICA
83602 Faculty of Medicine University of Cape Town, Cape Town

SPAIN
84704 Facultad de Medicina de la Universidad de Madrid, Madrid
84708 Facultad de Medicina de la Universidad de Valencia, Valencia
84710 Facultad de Medicina de la Universidad de Salamanca, Salamanca

SWITZERLAND
86901 Medizinische Fakultat der Universitat Basel, Basel
86902 Medizinische Fakultat der Universitat Bern, Bern
86905 Faculte de Medecine de l'Universite de Lausanne, Lausanne
86907 Medizinische Fakultat der Universitat Zurich, Zurich

THAILAND
89101 Faculty of Medicine at Chulalongkorn Hospital University of Medical Sciences, Bangkok
89102 Faculty of Medicine at Siriraj Hospital University of Medical Sciences, Thonburi

TURKEY
90201 Tip Fakultesi Istanbul Universitesi, Istanbul

UNION OF SOVIET SOCIALIST REPUBLICS
91302 Voronez Medical Institute, Voronez

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Berkley, Norman W., Seneca
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Boggs, Frank C., Topeka
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Bolton, Victor E., Kansas City, Kan.
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Butcher, Thomas P., Emporia
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C

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Carper, Owen E., Newton
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Carter, Robert P., Jr., Kansas City, Kan.
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Chaney, Ernie J., Belleville
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Chavalithamrong, Hansa, Hays
Chediak, Charles, Topeka
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Chester, Earl C., Pocatello, Idaho
Cheung, Philip W. Hong, Topeka
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Cho, Cheng T., Kansas City, Kan.
Chow, Stanley L. Y., Ft. Scott
Choy, James K. L., Topeka
Christensen, Marion D., Kiowa
Christian, Stanley J., Kansas City, Kan.
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Chun, Chung S., Kansas City, Kan.
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Cohn, Steven G., Overland Park
Cohnberg, Rosellen E., Cedar Vale
Cokeley, John M., Topeka
Coker, Grady N., Hutchinson
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Cole, Ward M., Wellington
Coleman, John S., Wichita
Coleman, Thomas J., Wichita
Colip, Floyd M., Norton
Collier, William J., McPherson
Collins, Dean T., Topeka
Collins, Francis T., Topeka
Combs, G. Ralph, Leavenworth
Combs, Peter S., Phillipsburg
Compton, Ariel S., Topeka
Conard, Clair C., Dodge City
Conard, Richard F., Emporia
Concepcion, Eugenio S., Jr., Wichita
Conklin, Kenneth E., Abilene
Cook, G. Edward, Wichita
Coomer, Tyler E., Pittsburg
Cooper, Arthur E., Norton
Cooper, Jack R., Shawnee Mission
Cooper, Leo F., Kansas City, Kan.
Copening, Tell B., Great Bend
Corbin, Murray D., Shawnee Mission
Corder, Robert L., Highland
Cornely, John F., Osborne
Corrigan, George F., Wichita
Cossman, F. Price, Wichita
Cotton, Robert T., Topeka
Couch, James R., Jr., Kansas City, Kan.
Coulter, Henry F., Mission
Coulter, Thomas B., Kansas City, Mo.
Cowles, George E., Wichita
Cowles, Gordon T., Wichita
Cox, Ira, Jr., Shawnee Mission
Cox, Wallace F., Kansas City, Kan.
Coyle, John F., Coffeyville
Craig, Charles C., Kansas City, Kan.
Cram, Ernest R., St. Francis
Cram, Ole R., Jr., Larned
Cramer, Guy W., Parsons
Cramm, Russell E., Hays
Crane, C. Herbert, Manhattan
Crary, John E., Topeka
Crawford, Robert A., Hutchinson
Crispen, John W., Garden City
Crist, Robert D., Kansas City, Kan.
Crockett, Charles A., Kansas City, Kan.
Cronemeyer, Richard L., Kansas City, Kan.
Cronin, Donald J., Wichita
Cross, Donald E., Kansas City, Mo.
Crouch, Steven W., Kansas City, Kan.
Crouch, William H., Topeka
Crow, Ernest W., Wichita
Crowley, Edward X., Wichita
Culp, Louis M., Kansas City, Kan.
Cultron, Frank T., Salina
Culver, Warren T., Lawrence
Cummings, Richard J., Wichita
Curran, Kevin E., Shawnee Mission

D

Daehnke, Sigurd S., Winfield
Dahl, Asher W., Colby
Daniels, Robert M., Valley Center
Darr, Richard B., Overland Park
Daugherty, Robert M., Meade
Davenport, Sidney S., Wichita
Davidson, Harry T., Wichita
Davis, Christopher G., Kansas City, Kan.
Davis, David H., Larned
Davis, David R., Emporia
Davis, George R., Ellsworth
Davis, James W., Jr., Kansas City, Kan.
Day, Hughes W., Kansas City, Kan.
Dean, David B., Topeka
DeBakker, Jan B., Wichita
DeBriere, Sidney L., Parsons
DeChairo, Thomas, Westmoreland
Decker, Donald D., Halstead
Degner, James B., Great Bend
DeHaan, Charles, Wichita
Deitz, Michael R., Kansas City, Kan.
DeJong, David C., Wichita
de la Torre, Jorge, Topeka
Dell'Ario, Alfred E., Topeka
Dellett, Kenneth B., El Dorado
Delp, Mahlon H., Kansas City, Kan.
Delphia, Robert E., Olathe
DeMott, Wayne R., Shawnee Mission
Denison, Terry R., Mission
Denner, Joseph L., Kansas City, Kan.
Depenbusch, Francis L., Hutchinson
Depoe, Joseph H., Winfield
DeTar, George F., Iola
Diacon, James L., Wellington
Dick, Arthur R., Kansas City, Kan.
Dick, Henry J., Chanute
Dickerson, Robert M., Garden City
Dickerson, Shelby C., Kansas City, Kan.
Dickinson, Charles R., Coffeyville
Diederich, Dennis A., Kansas City, Kan.
Diehl, Antoni M., Kansas City, Kan.
Diener, Clayton H., Hesston
Dietrich, Frederick G., Abilene
Dillenbeck, Floyd E., Sun City, Arizona
Diver, Robert W., Coffeyville
Dlabal, Frank A., Wilson
Doak, Roger S., Dodge City
Dobratz, Robert A., Beloit
Dockhorn, Robert J., Prairie Village
Dodson, William W., Ulysses
Doherty, William R., Shawnee Mission
Donnell, James M., Wichita
Doubek, Herbert D., Belleville
Dougherty, Thomas M., Garnett
Douthit, John D., Manhattan
Dowell, James C., Salina
Dozier, Fred S., Herington
Draemel, Harry R., Salina
Drake, Douglas J., Beloit
Drake, Ralph L., Wichita
Dreese, William C., Halstead
Dreher, Henry S., Salina
Drevets, Curtis C., Wichita
Duckett, Thomas G., Hiawatha
Dudding, Burton A., Kansas City, Kan.
Dudgeon, M. Maureen, Kansas City, Kan.
Duerksen, Joseph J., Overland Park
Dujovne, Carlos A., Kansas City, Kan.
Dunagin, Jack A., Topeka
Dunlap, Richard L., Lawrence
Dunn, Marvin I., Kansas City, Kan.
Dunshee, Carlyle M., Ft. Scott
Durano, Antonio C., Wichita
Durkee, William R., Manhattan
Durst, Robert D., Jr., Topeka
Duysak, Sami, Leavenworth
Dyck, Arthur H., McPherson
Dyck, Cora E., Wichita
Dyck, George, Wichita
Dysart, Jack C., Sterling

E

Eaton, Glen E., Salina
Eaton, Karen S., Kansas City, Kan.
Eaton, Leslie F., Salina
Ebbesson, Berno S. E., Wichita
Eckart, DeMerle E., Hutchinson
Eckert, William G., Wichita
Eddy, Murray C., Hays
Eddy, Victory M., Hays
Edwards, Manis C., Wichita
Eichhorn, Frank D., Garden City
Elder, Douglas M., Topeka
Elliott, Howard R., Pittsburg
Ellis, Harvey R., Wichita
Ellis, Stephen S., Coffeyville
Ellison, Paul D., Salina
Elnen, Walter T., Wichita
Emery, Frank A., Wichita
Empson, Charles L., Independence
Enders, Wray, Kansas City, Kan.
Enns, Eugene K., Newton
Enns, James H., Newton
Ens, G. George, Hillsboro
Ens, Peter D., Hillsboro
Ensey, T. Cranford, Marion
Erickson, Clarence W., Pittsburg
Erken, Ronald V., Wichita
Esch, John G., Pittsburg
Esrig, Harold L., D.O., Leawood
Etzenhouser, Russell D., Shawnee Mission
Evans, Darrel L., Manhattan
Evans, Farris D., Wichita
Evans, Grant E., Wichita
Evans, William E., Shawnee Mission
Evans, William R., Great Bend
Ewing, Thomas D., Larned

F

Fainstat, Theodore, Kansas City, Kan.
Fairchild, John A., Manhattan
Falter, Richard T., Hutchinson
Farha, George J., Wichita
Farha, S. Jim, Wichita
Farrell, Dennis H., Topeka
Farrell, George E., Salina
Fast, W. Spencer, Atchison
Feagan, Jerry H., Topeka
Feighny, Robert E., Salina
Felt, Samuel E., Shawnee Mission
Fender, Thomas H., Wichita
Fent, Lee S., Newton
Fenton, Robert M., Garden City

Fernandez, Luis A., Topeka
Fernie, Robert W., Hutchinson
Ferrell, Donald P., Wichita
Field, Richard A., Topeka
Fieldman, E. Jay, Wichita
Fields, Galen W., Scott City
Filley, Vernon W., Pratt
Fillman, Eldon M., Topeka
Fink, A. Arthur, Topeka
Finley, Dennis R., Wichita
Firkins, Richard T., Wichita
Fischer, Rex R., Manhattan
Fisher, James B., Wichita
Fitzgerald, Edward J., Wichita
Fitzgerald, Edward L., Lilburn, Georgia
Fitzpatrick, M. Robert, Kansas City, Kan.
Fixley, Mark S., Quebec, Canada
Flanders, H. Alden, Hays
Fleckenstein, Charles S., Onaga
Fleming, Peter D., Los Gatos, Calif.
Floersch, Hubert M., Kansas City, Kan.
Flowers, Clell B., Wichita
Flowers, Marshall B., Anthony
Ford, Charles R., Wichita
Ford, Fred L., Topeka
Forester, N. Preston, Kansas City
Foret, John D., Kansas City, Kan.
Fortune, Cedric B., Olathe
Foster, Charles G., Concordia
Foster, D. Bernard, Topeka
Foster, Frances M., Kansas City, Kan.
Fowler, James T., Osawatomie
Fowler, Robert J., Wichita
Fowler, Wayne L., Concordia
Fox, Howard A., Kansas City, Kan.
Francis, Norton L., Wichita
Francisco, Clarence L., Kansas City, Kan.
Francisco, W. David, Kansas City, Kan.
Franks, Darrell D., Kansas City, Kan.
Fransen, Herbert, Newton
Fransen, Paul H., Newton
Franz, Robert G., Hillsboro
Frederick, Mac F., Hugoton
Fredrickson, Duane E., Lindsborg
Freeborn, Warren S., Clyde
Freeman, F. Giles, Pratt
Freeman, Fred A., Manhattan
Freeman, Raymond S., Salina
Fretz, William D., Ashland
Friesen, Florence C., Hesston
Friesen, Orlando J., Buhler
Friesen, Stanley R., Kansas City, Kan.
Friggeri, Robert W., Girard
Fritz, George E., Wichita
Fritzemeier, William H., Wichita
Fromm, Arthur H., Wichita
Fry, Luther L., Dodge City
Fuller, Deryl D., Lindsborg
Fulton, John K., Wichita
Funes, Carlos A., Emporia
Funk, Edward D., Kansas City, Kan.

G

Gabatin, José Q., Wichita
Gallehugh, Keith W., Kansas City, Kan.
Galvan, Alonso, Wichita
Gann, E. Lamonte, Emporia
Gans, Frederick A., Salina
Ganzarain, Ramon C., Topeka
Garcia, Francisco M., Overland Park
Garcia, Gould C., Emporia
Gardner, Glenn M., Shawnee Mission
Garfinkle, Lester S., Wichita
Gehrt, Earl B., Chanute
Gelvin, E. Raymond, Concordia
Gench, Raymond L., Carmel, Calif.
Gendel, Evalyn S., Topeka
Gendel, Joseph, Topeka
Gentry, Kale C., Overland Park
George, Earl F., Wichita
George, M. Don, Wichita
Gerber, Harry A., Leavenworth
Gessler, Donald J., Wichita
Gettler, Dean T., Ft. Scott
Gilbert, J. Howard, Seneca
Gilbert, Roberta M., Prairie Village
Gilhousen, Frederic M., Kansas City, Kan.
Gill, Bruce D., Shawnee Mission
Gill, George L., Lampe, Mo.
Gillen, Billy A., Prairie Village
Gilles, Helen M., Lawrence
Gilliland, James O., Herington
Gilmore, Clarence A., Kansas City, Kan.
Ginavan, Duane A., Emporia
Girod, Charles I., El Dorado
Glazzard, Charles D., Olathe
Gleason, Jimmie A., Topeka
Glenn, James N., Emporia
Glenn, Lyle G., Protection
Glover, Richard M., Newton
Gloyne, Howard F., Shawnee Mission
Godfrey, Robert G., Kansas City, Kan.
Godfrey, William A., Kansas City, Kan.
Godwin, Phillip A., Lawrence
Goering, Donald D., Salina
Goering, Emil L., Topeka
Goering, Robert C., Wichita
Goertz, Leo R., Kansas City, Kan.
Goldberg, Herbert R., Wichita
Gollerkeri, Mohan P., Kansas City, Kan.
Gollier, Robert A., Ottawa
Gollier, Robert A., II, Ottawa
Gomel, Ray G., Washington
Gomez, Francisco, Shawnee Mission
Gomez, Modesto S., Pittsburg
Gonzalez, Giomar, Kansas City, Kan.
Gonzalez, Hiram, Wichita
Good, James T., Ft. Scott
Good, Wendell L., Shawnee Mission
Goodpasture, W. Carter, Hutchinson
Gootee, Joseph E., Topeka
Gorrell, Ned B., Parsons
Gough, James D., Phoenix, Ariz.
Gouldner, Rene M., Wichita
Gradinger, Billens C., Halstead
Grady, Kenneth L., Prairie Village
Graham, J. Malcolm, Leavenworth
Graham, Kenneth L., Leavenworth
Graham, Thomas W., Leavenworth
Grantham, Jared J., Kansas City, Kan.
Grauel, Charles W., Wichita
Grauel, Truman W., Wichita
Graves, Jack W., Wichita
Gray, C. Lucien, Wichita
Gray, David E., Topeka
Gray, H. Thomas, Wichita
Grayib, Antoine S., Topeka
Grayson, Roy D., Overland Park
Green, Lawrence C., Arkansas City
Green, Phillip E., Topeka
Greenberg, M. Taylor, Shawnee Mission
Greenberger, Norton J., Kansas City, Kan.
Greenburg, George, Garden City
Greene, Horace T., Topeka
Greenwood, Edward D., Topeka
Greenwood, James F., Ulysses
Greer, Richard H., Topeka
Greever, Boyd L., Hutchinson
Gregory, Arlene, Pittsburg
Gribble, Robert N., Wichita
Grigsby, George T., Jr., Topeka
Grigsby, Kenneth R., Coffeyville
Grillot, Floyd B., Wichita
Grimes, I. Ross, Liberal
Grimes, James T., Lyons
Gripkey, Clarence A., Kansas City, Kan.
Grisolia, Andres, Leavenworth
Griswold, Dale G., Newton
Grosjean, Wendell A., Winfield
Grove, John A., Newton
Grove, John L., Newton
Grove, William E., Newton
Growney, John T., Atchison
Gruendel, Richard A., Kansas City, Kan.
Gruendel, Virgina T., Kansas City, Kan.
Grushnys, Arnold, Wichita
Gsell, George F., Wichita
Gumucio, Mario L., Kansas City, Kan.
Gunn, Marvin R., Salina
Gunter, Carl C., Quinter
Guthrie, Richard A., Wichita

H

Habersang, Rolf W. O., Kansas City, Kan.
Hadley, Delmont C., Ottawa
Haerle, Henry S., APO, New York
Haffner, William N., Augusta
Hagan, C. Thomas, Wichita
Hagan, Francis J., Wichita
Haigler, James P., Hays
Haines, Chester W., Haven
Haines, Robert A., Topeka
Hale, Ralph, Wichita
Hall, Bernard H., New York, N. Y.
Hall, Clarence W., Hutchinson
Hall, Jerry D., Anthony
Halley, M. Martin, Topeka
Halling, L. William, Hays
Halpin, Edward D., Wichita
Hamilton, James J., Wakeeney
Hamm, Orval L., Sialkot, Pakistan
Hammeke, John C., Leavenworth
Hammel, George W., El Dorado
Hamtil, Lawrence W., Prairie Village
Hancock, Alan C., Kansas City, Kan.
Hannah, Hamner, III, Kansas City, Kan.
Hanson, David C., Yates Center
Hard, Benjamin F., Prairie Village
Hardin, Creighton A., Kansas City, Kan.
Hardman, Dennis A., Smith Center
Harms, Albert C., Shawnee Mission
Harms, Edwin M., Wichita
Harms, Wilmer A., Halstead
Harned, Bert W., Shawnee Mission
Harpster, Gene O., Leawood
Harris, Claib B., Garnett
Harris, Frank H., Wichita
Harris, Hubert L., Topeka
Harris, Norman R., Salina
Harris, Norvan D., Liberal
Harris, Patricia A., Topeka
Harrison, A. Brooks, Wichita
Harrison, Hall E., Topeka
Hart, Dillis L., Wichita
Hart, Lawrence E., Atchison
Hartenbower, Carey A., Salina
Hartley, Fount K., Wichita
Hartley, Roy W., Norton
Hartman, Charles R., Kansas City, Mo.
Hartman, Gerald V., Kansas City, Kan.
Hartman, Roger L., Norton
Hartocollis, Peter, Topeka
Harvey, Rosemary B., Wichita
Harwood, Claude J., Glasco
Hasselle, James E., Topeka
Haswell, Glenn L., Kansas City
Hathaway, Peter, Kansas City, Kan.
Hatton, Donald W., Lawrence
Hatton, Lloyd W., Salina
Hattrup, Richard J., Wichita
Havenhill, Marshall A., Emporia
Hawkey, Alfred S., Newton
Hawley, Raymond G., Concordia
Hayden, Abigail, Fredonia
Hayes, William L., Wichita
Heard, Kenneth M., Garden City
Heasty, Robert G., Manhattan
Hedrick, Kenneth E., Hutchinson
Heins, Lawrence G., Abilene
Henderson, Charles F., Parsons
Henderson, John M., Kansas City, Kan.
Henneberger, Charles E., Atwood
Henning, Calvin W., Ottawa
Henning, Charles E., Wichita
Hensleigh, Paul A., Kansas City, Kan.
Hensley, Cline D., Wichita
Hermann, Charles G., Parsons
Hermes, Richard L., Lawrence
Hermreck, Arlo S., Kansas City, Kan.
Hernandez, Alexander M., Garden City
Hershorn, Simon E., Wichita
Herzon, Charles D., Shawnee Mission
Hesser, Herbert H., Shawnee Mission
Hiatt, W. Stewart, Prairie Village
Hidaka, Harry T., Wichita
Hiebert, Abraham E., Wichita
Hiebert, David L., Lawrence
Hiebert, Peter E., Kansas City, Kan.
Hiesterman, Herman W., Quinter
Hilbig, Albert L., Liberal
Hildyard, Victor H., II, Colby
Hilgers, Jack E., Hays
Hill, James E., Arkansas City
Hill, John J., Hutchinson
Hill, Phillip K., Newton
Hill, Richard H., Meade
Hiller, F. Charles, Shawnee Mission
Hinkle, David O., Topeka
Hinshaw, Alfred H., Wichita
Hinshaw, Charles T., Wichita
Hinshaw, Charles T., Jr., Hutchinson
Hinshaw, Edgar D., Arkansas City
Hinthorn, Daniel R., Kansas City, Kan.
Hiratzka, Tomiharu, Wichita
Hird, Wayne E., Lawrence
Hirsch, Martin S., Bellevue, Nebr.
Hirschberg, J. Cotter, Topeka
Hobart, Wilson K., Topeka
Hobbs, Donald D., Topeka
Hobson, Milburn W., Shawnee Mission
Hodes, Herbert C., Hutchinson
Hodges, Glenn R., Kansas City, Kan.
Hodges, Merle A., Salina
Hodson, Hervey R., Wichita
Hofer, DeWayne D., Concordia
Hoffer, John G., Medicine Lodge
Holbert, Leland L., Kansas City, Kan.
Holcomb, Donald G., Los Angeles, Calif.
Holcomb, William M., Liberal
Holdcraft, Jacquelyne, Kansas City, Kan.
Holden, Raymond F., Wichita
Holderman, Wallace D., Hutchinson
Holladay, Harmon M., Wichita
Holladay, Kenneth R., Eudora
Holleman, James F., Jr., D.O., Kansas City, Kan.
Hollowell, Joseph G., Jr., Kansas City, Kan.
Holman, Jon B., Salina
Holman, Melvin V., Olathe
Holmes, Frederick F., Kansas City, Kan.
Holmes, Grace E., Kansas City, Kan.
Holsinger, Donald M., Pittsburg
Holt, John M., Great Bend
Holt, Robert G., Halstead
Holter, Harold V., Kansas City, Kan.

Hoofer, Wilford D., Halstead
Hoogstraten, Barth, Kansas City, Kan.
Hopke, Harold L., Olathe
Hopkins, B. Morris, Scott City
Hopkins, Lenly T., Overland Park
Hopkins, William O., Overland Park
Hopper, Charles R., Emporia
Horbelt, Douglas V., Wichita
Horne, James B., Topeka
Horseman, Robert F., Shawnee Mission
Hostetler, George M., Harper
Hostetter, Philip H., Manhattan
Howard, Donald O., Wichita
Howell, J. Allen, Wellington
Howerter, Bernard E., Jr., Coffeyville
Hoyle, Winthrop E., Winfield
Hoyt, Arthur W., Topeka
Huaman, Antonio, Topeka
Hubler, David, Wichita
Hudson, James R., Chanute
Hudson, Robert P., Kansas City, Kan.
Huebert, Dean A., Wichita
Huerter, Quentin C., Kansas City, Kan
Huff, John D., Kansas City, Kan
Huffman, David H., Kansas City, Mo.
Hughes, Robert W., Lawrence
Hull, Kenneth, Wichita
Hull, Norman E., Hays
Hultgren, Myron K., Wichita
Hume, Joseph W., Wichita
Hummer, Lloyd M., Wichita
Humphrey, Loren J., Kansas City, Kan.
Hunnicutt, Cecil C., Sabetha
Hunsberger, Terry, D.O., Garden City
Hunter, James S., Manhattan
Hurst, Thomas C., Wichita
Hurwitz, Aryeh, Kansas City, Kan.
Huse, Robert J., Mesquite, Tex.
Hustead, Robert F., Wichita
Huston, Francis W., Winchester
Huston, Joseph W., Topeka
Hutchison, Glen C., Hays
Hutton, Frederick A., Topeka
Hwa, Eugene C., Newton
Hyde, Marshall E., Wichita
Hyndman, H. Harold, Wichita
Hynes, Henry E., Wichita

I

Ibarra, J. Luis, Wichita
Ibarra, Richard C., Kansas City, Kan.
Ingham, H. Laird, Lawrence
Ingram, John E., Kansas City, Kan.
Innes, Robert C., Kansas City, Kan.
Irby, Addison C., Ft. Scott
Irby, Pratt, Ft. Scott
Isaac, Arnold G., Newton
Isaac, Charles A., Newton
Isenberger, Robert M., Kansas City, Mo.
Iturralde, George, Prairie Village

J

Jackman, Glenn H., Estes Park, Colo.
Jacks, J. Warren, Pratt
Jackson, Charles R., Wichita
Jackson, Delmas A., Jr., Topeka
Jackson, Linda H., Topeka
Jackson, Victor L., Altamont
Jacobs, David S., Kansas City, Kan.
Jacobs, Rae R., Kansas City, Kan.
Jacoby, Robert E., II, Topeka
Jager, Thor J., Wichita
Jahanian, Daryoush, Kansas City, Kan.
Jambor, James J., Dodge City
Janssen, Erwin T., Topeka
Janzen, Herman F., Hillsboro
Jarrott, John B., Hutchinson
Jayaram, Marandapaui R., Kansas City, Kan.
Jehan, Sayed S., Wichita
Jenkins, Neal M., Salina
Jenney, Charles B., Wichita
Jewell, Ross L., Coffeyville
Jewell, William R., Kansas City, Kan.
Johns, Leo E., Jr., Kansas City, Mo.
Johnson, Edgar W., Jr., DeSoto
Johnson, Frederick E., Topeka
Johnson, Howell D., Dodge City
Johnson, John E., Shawnee Mission
Johnson, J. Richard, McPherson
Johnson, Joseph H., El Dorado
Johnson, Leonard W., Leavenworth
Johnson, Paul D., Leavenworth
Jones, Charles E., Shawnee Mission
Jones, Clifford E., Wichita
Jones, Edward L., Great Bend
Jones, Forrest H., Columbus
Jones, Frank J., D.O., Kansas City, Mo.
Jones, Herman H., Kansas City, Kan.
Jones, H. Ivor, Prairie Village
Jones, H. Penfield, Lawrence
Jones, Sam, Hutchinson
Jorg, Helen H., Shawnee Mission
Joseph, Howard F., Lawrence
Joss, Charles S., Topeka
Jost, Gary D., Kansas City, Kan.
Joyce, G. Bernard, Topeka
Jubelt, Hilbert P., Manhattan
Jumper, Jerry L., D.O., Garden City
Justus, William J., Pleasanton

K

Kaelson, Paul A., Wichita
Kalavsky, Steven M., Kansas City, Kan.
Kalivas, James T., Kansas City, Kan.
Kane, William M., Hays
Kardatzke, Elmer S., Wichita
Kardatzke, Jon K., Wichita
Karnaze, Greg C., Kansas City, Kan.
Kasha, Robert L., Wichita
Kassebaum, Glen E., El Dorado
Kassel, Henry W., Lakewood, Colo.
Katz, Jerome B., Topeka
Kauffman, Ralph E., Kansas City, Kan.
Kaufman, Eugene E., Wichita
Kaufman, Leland R., Winfield
Kaufman, Willard E., Moundridge
Kaul, Anand N., Winfield
Kavel, Karl K., Topeka
Keegan, Reuben G., Winfield
Keene, George H., Wichita
Keeny, Maurice G., Wichita
Keil, James E., Osawatomie
Kelly, Charles R., Kansas City, Kan.
Kelly, Dan A., Topeka
Kelly, Robert H., Augusta
Kempthorne, Charles R., Manhattan
Kendall, Tommy E., Wichita
Kendrick, J. Gilleran, Wichita
Kennedy, Gerald T., Wichita
Kennedy, Howard U., Topeka
Kennedy, James A., Kansas City, Kan.
Kennedy, Kenneth R., Lenexa
Kepes, John J., Kansas City, Kan.
Kerby, Gerald R., Kansas City, Kan.
Kerr, Lambert A., Colorado Spgs., Colo.
Ketchum, Lynn D., Kansas City, Kan.
Keys, Robert C., Jr., Topeka
Khicha, Gyanchand J., Wichita
Khurana, Satish K., Kansas City, Kan.
Kihm, Albert A., Chanute
Kim, Jong M., Kansas City, Kan.
Kim, Yong W., Concordia
Kimball, Richard R., Mankato
Kimbrough, Victoria F., Lawrence
Kindling, Paul H., Topeka
King, Charles R., Kansas City, Kan.
King, William T., Great Bend
Kinnan, Leon F., Caldwell
Kirby, Merlin G., Great Bend
Kirchner, Fernando R., Kansas City, Kan.
Kirk, Earl D., Jr., Wichita
Kirkegaard, Rodger S., Topeka
Kiser, John L., Wichita
Kiser, Willard J., Wichita
Kishore, Pulla R. S., Kansas City, Kan.
Kitchen, Robert R., Wichita
Klassen, Daniel S., Newton
Klemme, Herbert L., Stillwater, Minn.
Klemmer, Herbert, Topeka
Klenda, Martin B., Jr., Beloit
Kliewer, Vernon L., Newton
Klingler, Eugene A., Jr., Manhattan
Klotz, Arthur P., Kansas City, Kan.
Knapp, Leslie E., Wichita
Knapp, M. Robert, Wichita
Knappenberger, Roy C., Wichita
Knecht, Stephen M., Emporia
Kneidel, Thomas W., Wichita
Knuth, Kenneth L., Independence
Kobler, Carl D., Hill City
Kodanaz, A. Aytekin, Shawnee Mission
Koeneke, Irene A., Halstead
Koons, Jess W., Liberal
Kosar, Clarence D., Concordia
Kouri, Sammy H., Wichita
Kovarik, Ernest D., Topeka
Kowalski, Anthony M., Topeka
Kozikowski, Ben M., Prairie Village
Krake, Alfred E., Africa
Krantz, Kermit E., Kansas City, Kan.
Krause, Roland L., Wichita
Kroll, Harry G., Topeka
Krueger, Alan L., Kansas City, Kan.
Krueger, Haven C., Great Bend
Kubin, Doris, Shawnee Mission
Kullman, Frederick M., Louisburg
Kurth, C. Joseph, Wichita
Kurth, Robert H., Shawnee Mission
Kutilek, Frank J., Wichita
Kwee, Sioe T., Kansas City, Kan.
Kyner, Joseph L., Kansas City, Kan.

L

Labhsetwar, S. A., Junction City
Latene, Benjamin W., Manhattan
Laham, Alexander J., Wichita
Laing, Robert R., Kansas City, Kan.
Laird, Dale D., Olathe
Lake, Max S., Salina
Lambright, Robert L., Shawnee Mission
Lance, John F., Jr., Wichita
Lance, Raymond W., Arma
Lansky, Lester L., Kansas City, Kan.
Lansky, Shirley B., Kansas City, Kan.
Lapi, Ruth, Shawnee Mission
Larson, Delbert L., Hiawatha
Lasley, David A., Salina
Latimer, Lester A., Shawnee Mission
Laury, David G., Ottawa
Law, Findley, Ellinwood
Lawless, Harold L., Blue Rapids
Lawn, Raymond A., Wichita
Laws, Lewis R., Maryville
Lawson, Dwight, Topeka
Lawson, Robert C., Topeka
Lawton, Marvin K., Concordia
Laybourne, Paul C., Jr., Kansas City, Kan.
Lazar, Harry, Wichita
Leake, Hunter C., III, Kansas City, Kan.
Learned, George R., Lawrence
Lee, Edward S., Jr., Wichita
Lee, Jae M., Overland Park
Lee, James, Jr., Kansas City, Kan.
Lee, Kyo Rak, Kansas City, Kan.
Lee, R. Rex, Wichita
Lee, Song P., Topeka
Leffler, Paul B., Pittsburg
Legaspi, Pedro L., Jr., Shawnee Mission
Leger, Lee H., Ft. Myers, Fla.
Leigh, Lawrence E., Shawnee Mission
Leitch, David A., Garnett
Lemoine, Albert N., Jr., Kansas City, Kan.
LeNeve, Robert T., Hugoton
Lenski, Frank X., Jr., Iola
Lentz, William R., Topeka
Lessenden, Chester M., Jr., Topeka
Lessenden, Glenn A., Lawrence
Lettner, Hans T., Hutchinson
Levy, Edwin Z., Topeka
Lewin, Walter, Prairie Village
Lewis, Harvey D., Jr., Kansas City, Mo.
Lewis, James E., Shawnee Mission
Lewis, James T., Rialto, Calif.
Lies, Barthel, Colwich
Liggett, Byron T., Great Bend
Lindley, Milton E., Wichita
Lindsley, Carol B., Kansas City, Kan.
Lindsley, Herbert B., Kansas City, Kan.
Linhardt, Ronald D., Wichita
Linshaw, Michael A., Kansas City, Kan.
Lipsey, James H., Shawnee Mission
Little, L. Gilbert, Wichita
Liu, Chien, Kansas City, Kan.
Liujuluschan, Rit, Oswego
Livingston, Charles E., Salina
Lloyd, Harvey L., Kansas City, Kan.
Lockhart, Joseph G., Wichita
Loeffler, James A., Wichita
Loewen, Henry H., Wichita
Loewen, Peter S., Hillsboro
Loewen, William C., Wichita
Lofgreen, Sylva Y., Ottawa
Lofgreen, Victor J., Ottawa
Logan, Geoffrey G., Wichita
Loganbill, Varden J., Moundridge
Lohmeyer, Kenneth L., Emporia
Long, Edward E., Humboldt
Long, Robert C., Norton
Longwood, Orlin W., Tucson, Ariz.
Lorentzen, Donald E., Newton
Lotito, Carlos A., Kansas City, Mo.
Lovett, Paul A., Wichita
Lovett, Rodney C., Prairie Village
Low, Harold L., Wichita
Low, Joseph H., Coffeyville
Lowe, Bruce A., Overland Park
Lowe, DeWitt S., Hiawatha
Lowe, Stanley W., Manhattan
Lowry, Ray F., El Dorado
Luedtke, Walter E., Emporia
Lueken, Lueke B., Wichita
Luellen, Thomas J., Wichita
Lukens, David, Hutchinson
Lukert, Barbara P., Kansas City, Kan.
Lungstrum, Jack E., Salina
Luzzati, Enzo F., Wichita
Lynch, John A., Topeka
Lyons, Dave J., Pittsburg

M

Mabunda, Guilherme A., Spearville
MacKillop, Daniel, Jr., Winfield

MacLeod, Sherburne, Wichita
Macy, Norman E., Salina
Madden, William J., Lincoln
Maddux, Bill D., Kansas City, Kan.
Madison, Ward N., Jr., Wichita
Madison, Willard A., Nortonville
Madsen, Glenn, Lawrence
Malone, Eugene M., Halstead
Manahan, G. Eugene, Lawrence
Mani, M. Mani, Kansas City, Kan.
Manley, Joseph W., Kansas City, Kan.
Mantz, Frank A., Kansas City, Kan.
Marchbanks, Donald L., Salina
Marsh, Harry H., III, Wichita
Marsh, Henry O., Wichita
Marshall, Bromell M., Topeka
Marshall, George D., Colby
Marshall, Ronald L., Manhattan
Martin, Albert E., Jr., Coffeyville
Martin, Daniel C., Shawnee Mission
Martin, Earl A., Parsons
Martin, Glen E., Wichita
Martin, Norman L., Kansas City, Kan.
Martin, Oliver L., Salina
Martin, William A., D.O., Kansas City, Kan.
Martin, William O., Topeka
Marvin, Norman G., Syracuse
Marymont, Jesse H., Wichita
Maser, George R., Mission
Masters, Francis W., Kansas City, Kan.
Masterson, Melvin L., Hutchinson
Mastio, George J., Wichita
Matassarin, Benjamin M., Wichita
Matassarin, Frederick W., Wichita
Mathewson, Hugh S., Kansas City
Mathis, Jerry L., Salina
Matthew, William L., Olathe
Mattick, Irvin H., Hays
Mattioli, Leone, Kansas City, Kan.
Mau, Walter, Topeka
Mauck, Harold C., Stockton
Maxfield, Russell J., Garden City
Maxwell, Gordon E., Salina
May, Kenneth L., Bonner Springs
McAllaster, Wendale E., Great Bend
McCann, Patrick E., Ft. Scott
McCann, William, Olathe
McCarter, Duane K., Topeka
McCarthy, Robert P., Kansas City, Kan.
McCaughey, Hugh W., Shawnee Mission
McClanahan, Ward A., Wichita
McClellan, Ernest L., Wichita
McClellan, John W., Topeka
McClintock, Edward A., Topeka
McClure, James A., Topeka
McComas, Marmaduke D., Jr., Concordia
McConnell, Archie B., Burlington
McCormick, Eugene C., Wellington
McCoy, Charles P., Wichita
McCoy, Charles T. Hutchinson
McCoy, Ronald, Dodge City
McCrae, Spencer C., Salina
McCreight, Eugene J., New Mexico
McCusker, Kevin T., Kansas City, Kan.
McDonald, Orville A., Tarpon Springs, Fla.
McEachen, William H., Shawnee Mission
McElhinney, Charles F., Dodge City
McElroy, Wilbur J., Topeka
McGovern, James L., Wellington
McGuire, William F., Wichita
McGurk, Thomas E., Overland Park
McIlvain, Guy B., Clay Center
McKee, Dick B., Pittsburg
McKee, Leo F., Cottonwood Falls
McKee, Michael B., Wichita
McKee, Richard S., Leavenworth
McKenna, Michael J., Fort Scott
McKerracher, Robert D., Derby
McKim, W. Lynn, Kinsley
McKnight, David E., Manhattan
McKnight, Ellis B., Alma
McLain, Kenneth, Ransom
McMullen, Joseph E., Hutchinson
McNeil, Elbert D., Manhattan
McReynolds, Charles R., Halstead
McSwain, Norman E., Jr., Kansas City, Kan.
McVay, R. Bruce, Clay Center
Mebust, Winston K., Kansas City, Kan.
Medearis, Donald N., Kansas City, Kan.
Medina, Anibal, Hays
Mee, Adrian W., Kansas City, Kan.
Meek, George C., Arkansas City
Meek, Joseph C., Kansas City, Kan.
Meeker, Bruce P., II, Wichita
Megaffin, Bernard B., St. Louis, Mo.
Mehaffy, Orville A., Baxter Springs
Mehrhof, Edward G., Topeka
Meidinger, Ray, Hiawatha
Meidinger, Richard, Topeka
Mekis, John, Cherryvale
Melendres, Juanito M., Shawnee Mission
Melia, Bernard J., Jr., Prairie Village
Melton, Ralph R., Marion
Menaker, Jerome S., Wichita
Mendoza, Ramon A., Garden City
Menehan, H. James, Wichita
Menendez, Jose O., Overland Park
Menez, Cesar V., Overland Park
Menninger, Karl A., Topeka
Menninger, Robert G., Topeka
Menninger, Roy W., Topeka
Menninger, W. Walter, Topeka
Mercer, James B., Lenexa
Meredith, W. Tom, Wichita
Merkel, Earl D., Russell
Merritt, W. Henry, Leavenworth
Mershon, H. Ruth, Hutchinson
Mershon, James C., Wichita
Mesina, Rolando R., Kansas City, Kan.
Meulbroek, Harvey J., Wichita
Meyer, Warren E., Wichita
Michaelbach, Albert P., Wichita
Miguelino, Oliver M., Emporia
Mih, Alexander W. S., Humboldt
Milbank, George E., Wichita
Miles, Anthony W., Wichita
Miles, Robert W., Wichita
Miller, Abraham H., Manhattan
Miller, Charles H., Parsons
Miller, Clyde W., Wichita
Miller, Dean M., Parsons
Miller, Don E., Wichita
Miller, Earl E., Pittsburg
Miller, Elden V., Salina
Miller, Franklin R., Winfield
Miller, Herbert C., Kansas City, Kan
Miller, M. Kirk, Topeka
Miller, Monte B. (In Service)
Mills, Charles D., Wichita
Mills, Philip E., Jr., Topeka
Mimoso, Jose J. Garden City
Minnick, Charles V., Junction City
Mirza, Medo, Wichita
Mitchell, Alexander C., Lawrence
Mitchell, John C., Salina
Mitts, Ernest W., Bonner Springs
Modlin, Herbert C., Topeka
Moe, Frederick H., Hutchinson
Moeller, Donald D., Kansas City, Kan.
Moffat, Robert E., Kansas City, Kan.
Mohler, Jack M., Abilene
Mollohan, Morgan L., Longville, Minn.
Montgomery, Thomas A., Sabetha
Montgomery-Short, Ruth, Halstead
Moore, Chester E., Gardner
Moore, Dennis F., Wichita
Moore, Robert, Hoisington
Moore, Robert F., Caney
Moore, Wayne V., Kansas City, Kan.
Moorhead, F. Allen, Neodesha
Moorman, Victor R., Hutchinson
Moreland, Donald G., Wichita
Morffi, Raul R., Kansas City, Kan.
Morgan, Candice A., Kansas City, Kan.
Morgan, James I., Wichita
Morgan, John L., Emporia
Morgan, Louis S., Wichita
Morgan, Nova L., Haysville
Morris, Merle D., Topeka
Morris, Robert E., Wichita
Morrison, David E., Jr., Topeka
Morrison, Ira R., Atchison
Morrison, Richard A., Kansas City, Kan.
Morrison, Richard L., Wichita
Morrow, J. Tarlton, Topeka
Morrow, Thomas F., Wichita
Morton, John E., Halstead
Morton, Roscoe F., Arkansas City
Moseley, Jack E., Wichita
Moser, Ernest C., Holton
Moser, M. Ross, Holton
Moser, Roy H., Holton
Mosier, Stanley J., Wichita
Mowery, William E., Salina
Mowry, Gerald L., Manhattan
Moy, James T., Wichita
Moyer, Herman J., Derby
Moyer, John D., Topeka
Muceno, Dar, Topeka
Muehlberger, James J., Prairie Village
Mueller, Arnold V., Topeka
Mueller, J. Kent, Shawnee Mission
Mueller, Vernette A., Wichita
Mull, John C., Hutchinson
Mullen, Clifford J., Kansas City, Kan.
Mullen, Clifford J., Jr., Kansas City, Kan.
Murfitt, Malcolm C., Lindsborg
Murphy, Duane A., Wichita
Murphy, Paul M., Wichita
Myers, Earl B., Jr., Independence
Myers, JoAnn, Topeka
Myers, Robert W., Newton
Myers, W. Eugene, Iola

N

Nabours, Richard D., Topeka
Nachtigall, Andrew, Newton
Nash, Newman C., Scottsdale, Ariz.
Nash, Robert A., Shawnee Mission
Nason, Herbert M., Kansas City, Kan.
Nassour, Paul A., Leavenworth
Neel, Wilbur B., Hutchinson
Neighbor, Ernest G., Kansas City, Kan.
Neighbor, Ernest H., Pittsburg
Neighbor, Gaylord P., Kansas City, Kan.
Neil, Roy, Hays
Neis, Harry B., Osage City, Mo.
Nelson, Gerald D., Wichita
Nelson, James N., Topeka
Nelson, Paul L., Concordia
Nelson, Richard O., Lawrence
Nelson, Russell A., Wichita
Nelson, T. Eugene, Ft. Scott
Neuenschwander, John R., Hoxie
Nevitt, J. Russell, Moran
Newby, James P., Wichita
Newman, Clifford, Pittsburg
Newsom, F. Carter, Wichita
Newton, Charles R., DeRidder, La.
Nice, G. William, Topeka
Nickell, Wendell K., Salina
Niederee, W. Curtis, Great Bend
Nieman, John L., Shawnee Mission
Nienstedt, John F., Sun City, Ariz.
Nixon, R. Roy, Concordia
Nixon, William A., Wichita
Nohe, Philip C., Kansas City, Kan.
Norris, Charley W., Kansas City, Kan.
Norris, Robert P., Wichita
North, Doris G., Wichita
North, Victor, Wichita
Norton, Robert K., Wichita
Nosti, Juan C., Shawnee Mission
Nothnagel, Arnold F., Kansas City, Kan.
Novotny, Peter C., Topeka
Null, William G., Salina
Nunemaker, Marion E., Hutchinson
Nyberg, Fredrik F., Wichita
Nystrom, Curtis A., Topeka

O

Ohando, Guillermo, Salina
Obourn, Robert L., Topeka
O'Connell, Paul J., Kansas City, Kan.
O'Dell, Michael L., Kansas City, Kan.
O'Donnell, Harold F., Sun City, Calif.
O'Donnell, Harry E., Junction City
O'Donnell, H. St. Clair, Ellsworth
O'Donnell, Leonard A., Wichita
O'Donnell, Leonard A., Jr., Wichita
O'Donnell, Richard H., Clay Center
O'Grady, Joseph A., Halstead
Oh, Shi-Han, Winfield
Ohman, Richard J., Dodge City
Ohmart, Richard V., Oakley
Oktawiec, Danuta, Shawnee Mission
Oldfield, Ray W., Kansas City, Kan.
Olney, Robert D., Manhattan
Olson, Carl E., Lawrence
Olson, Clitus W., Goodland
Olson, Erwin T., Newton
Oltman, Theodore V., Riley
O'Neil, Robert H., Topeka
Openshaw, Calvin R., Hutchinson
Orchard, Richard A., Lawrence
Osborne, Conrad C., Wichita
Osgood, George M., Prairie Village
O'Shea, James G., Jetmore
Osio, Antonio L., Wichita
Osoba, William G., Wichita
Overholser, Norman H., El Dorado
Owen, Garry D., Lawrence
Owen, La Rue W., Wichita
Owen, Pere A., Wichita
Owensby, Lindell C., Concordia
Oxley, Dwight K., Wichita

P

Pace, John D., Parsons
Padgett, William L., Wichita
Page, Ruth, Wichita
Page, Vale, Plainville
Paine, George E., Hutchinson
Palmer, David L., Wichita
Palmer, Gerald K., Salina
Palmer, H. Preston, Scott City
Paranjothi, Subramoniam, Oswego
Pardo, Lillian G., Kansas City, Kan.
Pardo, Manuel P., Kansas City, Kan.

Park, Chan H., Kansas City, Kan.
Parker, David F., Tonganoxie
Parker, Dean B., Ness City
Parker, Harold L., Wichita
Parker, Joseph W., Jr., Emporia
Parker, Robert W., Leavenworth
Parker, Wayne G., Emporia
Parman, Robert D., Topeka
Parmley, Charles C., Wichita
Parmley, Ray T., Kansas City, Kan.
Parra, Miguel D., Kansas City, Kan.
Paschino, Antonio R., Shawnee Mission
Patterson, Alice W., Larned
Patterson, Harold L., Larned
Patterson, John R., Shawnee Mission
Patzkowsky, Lawrence W., Kiowa
Payne, Robert R., Topeka
Pazell, John A., Kansas City, Kan.
Pearce, Eugene W. J., Shawnee Mission
Pearce, Lunetta A. M., Shawnee Mission
Pearson, Marion C., Concordia
Peckenschneider, Lloyd E., Halstead
Pederson, Arnold M., Plainville
Pedraza, Hernando V., Newton
Pees, Gerald B., Iola
Peffly, Elmer D., Chetopa
Pendharker, Mahadeo B., Topeka
Penka, Wayne E., Kansas City, Kan.
Penn, George M., Topeka
Pennington, Katherine, Wichita
Pentecost, Richard L., Leawood
Pereira, Willy G., Arkansas City
Perkins, Jack L., Hutchinson
Perry, Lawrence L., Jr., Kansas City, Kan.
Peters, Dale W., Wichita
Peters, Glenn R., Kansas City, Kan.
Petersen, A. Gene, Prairie Village
Petersen, Gerald D., Prairie Village
Peterson, Dean L., Topeka
Peterson, Evan A., Wathena
Peterson, Jack T., Manhattan
Peterson, Robert L., Emporia
Petrie, Samuel C., Shawnee Mission
Petrik, Edwin L., Topeka
Pettegrew, Pauline K., Prairie Village
Petterson, Cecil E., Syracuse
Petterson, O'Ruth S., Wichita
Pettijohn, Walter J., Russell
Pettis, Arthur L., Newton
Pfeffer-Hurwitz, Judith, Kansas City, Kan.
Pfuetze, Robert E., Topeka
Philgreen, Donald E., Ottawa
Phillips, Stephen B., Manhattan
Phillips, Warren G., Prairie Village
Phipps, Jack G., Wichita
Pierce, Charles F., Topeka
Pierce, Donald R., Topeka
Pierce, George E., Kansas City, Kan.
Pierron, George J., Olathe
Pierson, Weir, McPherson
Pilchard, William A., Kansas City, Kan.
Pincomb, Arthur L., Olathe
Pingleton, William W., Kansas City, Kan.
Pinsker, Jacob A., Wichita
Pischke, Frank J., Kansas City, Kan.
Pitman, Will D., Pratt
Pitts, Ronald L., Shawnee Mission
Plowman, Carl W., Jewell
Podrebarac, Leonard F., Wichita
Pogson, George W., Pittsburg
Pokorny, Charles, Halstead
Pol, P. Albert, Shawnee Mission
Poling, Terry L., Wichita
Polson, Robert C., Great Bend
Poole, Bernard T., Wichita
Porter, David M., Kansas City, Kan.
Porter, Garry L., Wichita
Porter, Robert D., Topeka
Porter, William J., Pratt
Potter, Robert L., Kansas City, Kan.
Powell, Benson M., Topeka
Powell, Carol W., Leawood
Powell, Kenneth A., Kansas City, Mo.
Powell, William R., Topeka
Powers, G. Robert, Kansas City, Kan.
Powers, Harold W., Topeka
Powers, K. Dean, Wichita
Powers, William F., Scottsdale, Ariz.
Pratt, William L., Leavenworth
Preheim, Delbert V., Newton
Preston, David F., Kansas City, Kan.
Preston, Ralph R., Topeka
Pretz, James B., Kansas City, Kan.
Price, Laurance W., Jr., Lawrence
Price, Pedro G., Guthrie, Okla.
Price, Vaughan C., McPherson
Prochazka, Otto F., Liberal
Proctor, Robert W., El Dorado
Prokop, Bradford S., Topeka
Pronko, Michael J., Prairie Village
Proud, G. O'Neil, Kansas City, Kan.
Pugh, David M., Kansas City, Kan.
Pullman, Norman K., Wichita
Purinton, Lew W., Wichita
Purves, Robert K., Wichita
Pusitz, Manuel E., Topeka
Putnam, Lyle B., Wichita
Pyle, Lucien R., Topeka

Q

Qamar, Yusuf, Newton
Quackenbush, Robert P., St. John

R

Rabe, Melvin A., Leavenworth
Rabin, Erwin R., Topeka
Radom, Sanford B., Kansas City, Mo.
Radovanov, Radmila, Wichita
Rainbow, Kathryn A., Topeka
Raines, Omer M., Topeka
Rajanna, Krishna, Shawnee Mission
Ramchandani, Ashok P., Elkhart
Ramsey, Bartlett W., Topeka
Randle, Jack E., Bucklin
Ransdell, Edgar C., Topeka
Ransom, James H., Topeka
Rassa, Reza P., Salina
Rate, Robert G., Halstead
Rathbun, Edwin D., Liberal
Ratzlaff, Abraham K., Goessel
Rau, Jerold M., Kansas City, Kan.
Rawcliffe, Robert A., Wichita
Rayburn, Frederick W., Topeka
Read, William T., Coffeyville
Reals, William J., Wichita
Reazin, Walter L., Wichita
Reckling, Frederick W., Kansas City, Kan
Reddy, P. Jagannadha, Hill City
Redford, John W. B., Kansas City, Kan.
Reece, Adelbert S., Gardner
Reece, Adelbert T., Gardner
Reece, Carol Ann, Gardner
Reece, Richard J., Salina
Reed, A. J., Wichita
Reed, D. Cramer, Wichita
Reed, James S., Saigon, Vietnam
Reed, Ralph R., Lawrence
Reese, Jack D., Liberal
Reese, John L., Lawrence
Reeve, Arnold M., Kansas City, Kan.
Reeves, Bradford F., Wichita
Reeves, Charles S., Fort Scott
Regier, Henry L., Kansas City, Kan.
Regier, LaDonna M., Colby
Reid, David W., Topeka
Reifsneider, J. Stanley, Sedona, Arizona
Reinhardt-Wulf, Taissia, Wichita
Reinking, Victor E., Topeka
Reis, Robert L., Kansas City, Kan.
Reitz, Leland C., Manhattan
Reitz, Roger P., Manhattan
Reivich, Ronald S., Overland Park
Relihan, Donald A., Wichita
Relihan, Francis H., Smith Center
Rempel, John H., Wichita
Renner, Marion J., Goodland
Rentfrow, James W., Ponca City, Okla.
Replogle, Charles B., Great Bend
Rettenmaier, Albert J., Kansas City, Kan.
Reusch, Clifford S., Colo. Springs, Colo.
Reyes, Francisco A., Jr., Ottawa
Reymond, Ralph D., Topeka
Reynolds, Jeffrey C., Hays
Reynolds, Lloyd W., Hays
Rhoads, James P., Wichita
Rhoden, Curtis H., Wichita
Rhodes, Ivan E., Wichita
Rhodes, James B., Kansas City, Kan.
Rhodes, Lowell M., Wichita
Rice, Frederick A., Jr., Kansas City, Kan.
Rich, Eldon S., Newton
Richards, Dennis D., Clay Center
Richardson, Jay L., Arkansas City
Richardson, Stewart F., Wichita
Richert, Robert C., Kansas City, Mo.
Rick, Gregory G. P., Jr., Kansas City, Kan.
Ridlon, Albert M., Osawatomie
Riedel, Robert H., Topeka
Rieger, Ernest H., Wichita
Rieke, Frank A., Shawnee Mission
Riley, Ray B., Kansas City, Kan.
Riordan, Hugh D., Wichita
Rising, Jesse D., Kansas City, Kan.
Rizza, Robert G., Halstead
Roberts, Daniel K., Wichita
Roberts, Fred F., Kansas City, Kan.
Roberts, Howard E., Topeka
Roberts, Louis S., Wichita
Roberts, Richard S., Lawrence
Roberts, Warren E., Topeka
Robertson, Joseph K., Wichita
Robinson, David W., Kansas City, Kan
Robinson, Edgar L., Independence
Robinson, G. Donald, Wichita
Robinson, John E., Wichita
Robinson, Ralph G., Kansas City, Kan.
Robinson, Robert H., Wichita
Robison, Corbin E., Lawrence
Robison, James T., Kansas City, Kan.
Roderick, James E., Salina
Rodriguez, Paul L., Garden City
Roeder, Robert E., Topeka
Rohr, Joseph H., Shawnee Mission
Romalis, Brian E., Wichita
Rombold, Charles R., Augusta
Romeiser, Rex S., Salina
Romig, Donald A., Kansas City, Kan.
Rook, Lee E., Kansas City, Kan.
Rorabaugh, Donald C., Abilene
Rose, Donald L., Bella Vista, Ark.
Rose, Shelby D., Wellington
Rosenberg, Stanton L., Shawnee Mission
Rosenberg, Thomas F., Wichita
Rosenfeld, Warren N., Kansas City, Kan.
Ross, Jack L., Topeka
Rossitto, Anthony F., San Francisco, Calif.
Roth, Alan E., Kansas City, Kan.
Rothrock, Irvin A., Lawrence
Rouse, Paul H., Lansing
Rowlett, Jack G., Paola
Roy, William R., Topeka
Rubin, Ben, Jr., Kansas City, Kan.
Rubin, Herbert M., Prairie Village
Ruble, James L., Jr., Overbrook
Rucker, Clemens, Topeka
Rueb, Andrew E., Salina
Ruiz, Carlos M., Larned
Rumold, Mervin J., Shawnee Mission
Runnels, John B., Topeka
Russell, Homer B., Great Bend
Russell, Philip W., Wichita
Ruth, William E., Kansas City, Kan.
Ruzicka, Lawrence J., Concordia
Ryan, Edward J., Emporia
Ryan, Michael J., Kansas City, Kan.

S

Sabin, George M., Jr., Wichita
Saffo, Karl S., Shawnee Mission
Sanchez, Rogelio, Topeka
Sanders, J. Alan, Lawrence
Sandhu, Paul S., Coffeyville
Santiago, Eleanor M., Kansas City, Kan.
Santoscoy, Gilbert S., Wichita
Sargent, Joseph, Topeka
Saul, F. William, Emporia
Sawkar, Laxmidas A., Shawnee Mission
Sayler, Jerome, Great Bend
Saylor, Edward H., Topeka
Saylor, Leslie L., Topeka
Scales, William M., Blue Eye, Mo.
Scamman, W. Wike, Topeka
Scanlon, James H., Haddam, Conn.
Schaefer, Joseph P., Shawnee Mission
Schaffer, Clarence K., Santa Cruz, Calif.
Schaffer, Richard A., Kansas City, Kan.
Schalker, David E., Topeka
Schaum, Stephen P., Kansas City, Kan.
Schellinger, Richard P., Emporia
Scherer, Alfred L., St. John
Schiltz, Frances H., Wichita
Schimke, R. Neil, Kansas City, Kan.
Schlachter, Ernest R., Wichita
Schlemmer, Roger B., Pittsburg
Schlicher, John E., Wichita
Schloerb, Paul R., Kansas City, Kan.
Schloesser, Harvey L., Topeka
Schlotterback, William E., Mankato
Schlozman, Daniel L., Prairie Village
Schlueter, John J., Wichita
Schmaus, Lyle F., Iola
Schmidt, Alfred F., Little River
Schmidt, Herbert R., Newton
Schmidt, Ramon W., Garden City
Schnoebelen, Rene E., Kinsley
Schopf, Clifton C., Wichita
Schotland, Edward S., Kansas City, Kan.
Schrepfer, Rosemary, Kansas City, Kan.
Schroeder, Sydney O., Lawrence
Schroll, Jack C., Hutchinson
Schultz, James E., Council Grove
Schultz, Wayne H., Hutchinson
Schulz, Millard E., Manhattan
Schwartz, Eugene W., Dodge City
Schwartz, John H., Salina
Schwartz, V. Dean, Wichita
Schwegler, Raymond A., Lawrence
Schwegler, Raymond A., Shawnee Mission

adjunctive therapy for wound debridement

HELPS TO REMOVE:

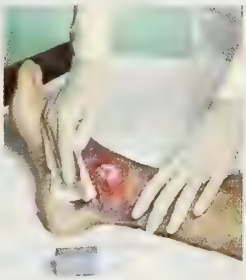
- Necrotic Tissue and Associated Odor

HELPS PREPARE WOUND FOR:

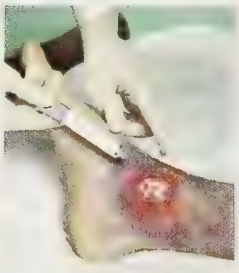
- Granulation/Healing
- Granulation/Grafting



CLEANSE WOUND
Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials.



THOROUGHLY MOISTEN
Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g., sodium chloride or water solutions).



APPLY ENZYME
Apply a layer of TRAVASE Ointment. Assure intimate contact with necrotic tissue and complete wound coverage.

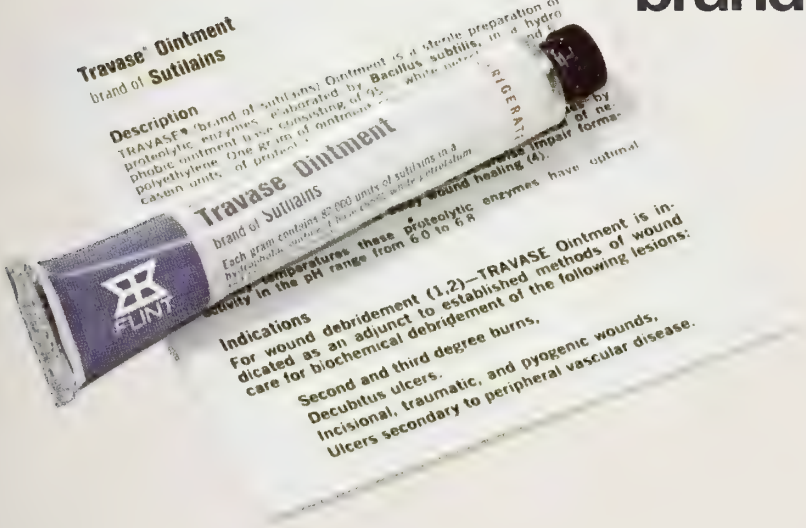


APPLY MOIST DRESSING
Apply loose moist dressings (most important with dry leathery eschar).



CHANGE DRESSINGS
When changing dressing, gently wipe away the dissolved material. Repeat the procedure, including application of TRAVASE Ointment, 3 to 4 times per day for best results.

Travase Ointment
brand of Sutilains



FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Please see next page for prescribing information.

Travase® Ointment brand of Sutilains

ulcers

TERRY V. CARLE, M.D., CLINICAL INSTRUCTOR, DEPT. OF PHYS. MED. & REHAB., CRAIG REHABILITATION HOSPITAL, UNIVERSITY OF COLORADO



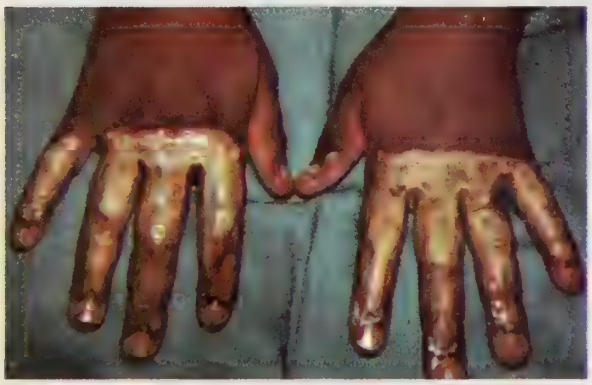
Before treatment, necrotic matter coated the inner surfaces of this decubitus ulcer.



After nine days of TRAVASE therapy, debridement is nearly complete and granulation evident.

burns

DALE B. DUBIN, M.D., DIPLOMATE, AMERICAN BOARD OF PLASTIC SURGERY, TAMPA, FLORIDA



Before treatment . . .



48 hours following treatment with TRAVASE Ointment on right hand; left hand is control.

Travase® Ointment

(brand of Sutilains)

Indications: For wound debridement, TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:

- Second and third degree burns,
- Decubitus ulcers,
- Incisional, traumatic, and pyogenic wounds,
- Ulcers secondary to peripheral vascular disease.

Contraindications: Application of TRAVASE Ointment is contraindicated in the following conditions:

- Wounds communicating with major body cavities,
- Wounds containing exposed major nerves or nervous tissue,
- Fungating neoplastic ulcers,
- Wounds in women of child-bearing potential—because of lack of laboratory evidence of effects of TRAVASE upon the developing fetus.

Warning: Do not permit TRAVASE Ointment to come into contact with the eyes. If contact is made, immediately rinse with copious amounts of water, preferably sterile.

Precautions: A moist environment is essential to optimal activity of the enzyme. Enzyme activity may also be impaired by certain agents (see package insert). Although there have been no reports of systemic allergic reaction in humans, studies have shown that there may be an antibody response in humans to absorbed enzyme material.

Adverse Reactions: Consist of mild, transient pain, paresthesias, bleeding and transient dermatitis. Pain usually can be controlled by administration of mild analgesics. Side effects severe enough to warrant discontinuation of therapy occasionally have occurred.

If bleeding or dermatitis occurs as a result of the application of TRAVASE Ointment, therapy should be discontinued. No systemic toxicity has been observed as a result of the topical application of TRAVASE Ointment.

DOSAGE AND ADMINISTRATION: STRICT ADHERENCE TO THE FOLLOWING IS REQUIRED FOR EFFECTIVE RESULTS OF TREATMENT:

1. Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials which may denature enzyme or alter substrate characteristics (e.g., hexachlorophene, silver nitrate, benzalkonium chloride, nitrofurazone, etc.).
2. Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g. sodium chloride or water solutions).
3. Apply TRAVASE Ointment in a thin layer assuring intimate contact with necrotic tissue and complete wound coverage extending ¼ to ½ inch beyond the area to be debrided.
4. Apply loose wet dressings.
5. Repeat entire procedure 3 to 4 times per day for best results.

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ADM	Administrative Medicine
A	Allergy (sub-specialty of Internal Medicine)
ANES	Anesthesiology
AM	Aviation Medicine (special field of Preventive Medicine)
CD	Cardiovascular Disease (sub-specialty of Internal Medicine)
CHP	Child Psychiatry (sub-specialty of Psychiatry)
CP	Clinical Pharmacology
CRS	Colon and Rectal Surgery
DR	Diagnostic Roentgenology (special field of Radiology)
D	Dermatology
EM	Emergency Medicine
ENT	Ear, Nose and Throat
FOP	Forensic Pathology (special field of Pathology)
FP	Family Practice
GE	Gastroenterology (sub-specialty of Internal Medicine)
GPM	General Preventive Medicine (special field of Preventive Medicine)
GS	General Surgery
GEN	Genetics
GER	Geriatrics
GYN	Gynecology
HEM	Hematology
IM	Internal Medicine
NM	Nuclear Medicine
NS	Neurological Surgery
N	Neurology
NP	Neuropsychiatry
OBG	Obstetrics and Gynecology
OM	Occupational Medicine (special field of Preventive Medicine)
OPH	Ophthalmology
ORS	Orthopedic Surgery
OST	Osteopathy
OTO	Otolaryngology
PATH	Pathology
PD	Pediatrics
PDA	Pediatric Allergy (sub-specialty of Pediatrics)
PDC	Pediatric Cardiology (sub-specialty of Pediatrics)
PDN	Pediatric Neurology (sub-speciality of Pediatrics)
PM	Physical Medicine and Rehabilitation
PS	Plastic Surgery
P	Psychiatry
PH	Public Health (special field of Preventive Medicine)
PUD	Pulmonary Diseases (sub-specialty of Internal Medicine)
R	Radiology
RES	Resident
RHU	Rheumatology
SH	School Health
TR	Therapeutic Radiology (special field of Radiology)
TS	Thoracic Surgery
U	Urology
OO	Retired

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Line 3: 33 M 1902 58 FP
(Year of Birth) (Sex) (Medical School) (Year of Graduation) (Specialty)

Telephone area code follows city name.

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(263-4131)
35 M 1902 61 FP

Butcher, Archie W., 102 N.W. 2nd St., 67410
(263-1333)
01 M 1902 35 FP

Chaffee, Dean C., 1111 Brady, 67410
(263-4131)
11 M 1902 44 FP

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02 M 1902 28 OO

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97 M 4102 21 OO

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32 M 1902 61 FP

Rorabaugh, Donald C., 1111 Brady, 67410
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(Pottawatomie County Society)

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(Labette County Society)

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(784-5318)
20 M 2105 50 FP

ANDALE—316
(Sedgwick County Society)

Stech, Joseph M., Andale Clinic, 67001
(445-2152)
27 M 3006 56 FP

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(Tri-County Society)

Antrim, Philip J., 1101 E. Spring, 67003
(842-5144)
15 M 1902 42 FP

Flowers, Marshall B., 725 N. Anthony, 67003
84 M 2005 07 00

Hall, Jerry D., 1101 E. Spring, 67003
(842-5144)
31 M 3901 56 FP

ARKANSAS CITY—316
(Cowley County Society)

Alvarez, Norberto, 323 N. Summit, 67005
(442-2100)
27 M 2750 53 FP

Aucar, Alfredo, 2508 Edgemont Dr., 67005
(442-1710)
23 M 27501 53 ENT

Braley, Jack A., D.O., 216 AC Office Bldg., 67005
(442-6660)
29 M 1875 68 FP

Campbell, Garland L., 201 A. C. Office Bldg., 67005
(442-1350)
13 M 1902 40 U

Green, Lawrence C., 112 E. Central Ave., 67005
(442-4850)
43 M 3901 69 FP

Hill, James E., 2508 Edgemont Dr., 67005
(442-4300)
09 M 1902 34 OPH

Hinshaw, Edgar D., Rt. #3, 67005
(442-1273)
15 M 1902 51 R

Meek, George C., 323 N. Summit, 67005
(442-2100)
05 M 1902 32 FP

Morton, Roscoe F., 302 A. C. Office Bldg., 67005
(442-2450)
13 M 401 42 IM

Pereira, Willy G., 323 N. Summit, 67005
(442-2100)
39 M 73701 67 IM
Richardson, Jay L., 2508 Edgemont Dr., 67005
(442-4150)
38 M 1902 65 GS
Smith, Bruce G., 115 Hillside, 67005
(442-5600)
20 M 1902 44 IM
Smith, Newton C., 323 N. Summit, 67005
(442-2100)
21 M 3901 45 FP
Smith, Stephen J., 115 Hillside, 67005
(442-5600)
45 M 1902 71 FP

ARMA—316
(Crawford County Society)

Lance, Raymond W., Box AA, 66712
(347-8619)
22 M 1902 47 FP

ASHLAND—316
(Iroquois County Society)

Burket, Ivan R., 124 W. 7th, 67831
(635-2714)
88 M 2401 14 FP
Fretz, William D., 67831
(635-2724)
47 M 1902 73 GS

ATCHISON—913
(Atchison County Society)

Bosse, Frank K., 1301 Riverview Dr., 66002
(367-0692)
09 M 2802 33 OO
Brady, Charles S., 111 N. 5th, 66002
(367-1232)
10 M 3006 38 GS
Bribach, Eugene J., 125½ N. 5th, 66002
(367-0225)
83 M 2802 05 OPH
Brown, Robert O., 1400 N. 2nd St., 66002
(367-1922)
14 M 1902 44 FP
Burke, Joseph V., 1301 N. 3rd, 66002
(367-5496)
35 M 3006 66 GS
Fast, W. Spencer, 104 N. 6th, 66002
(367-0362)
11 M 3006 39 FP
Growney, John T., 801 Atchison, 66002
(367-5020)
37 M 3006 62 FP
Hart, Lawrence E., 1412 N. 2nd, 66002
(367-5054)
32 M 1902 64 FP
Morrison, Ira R., 801 Atchison, 66002
(367-2763)
07 M 1611 36 IM
Stuart, Francis I., 914 N. 5th, 66002
(367-3542)
85 M 3006 08 OO
Tayiem, Abdel K., 106 N. 4th, 66002
(367-0362)
43 M 33002 68 GS
Wallace, Wayne O., 1301 N. 3rd, 66002
(367-5434)
12 M 1902 37 FP
Wallace, Wayne O., Jr., 1301 N. 3rd, 66002
(367-5434)
36 M 2803 65 FP
Wulff, Edwin T., 111 N. 5th, 66002
(367-5033)
07 M 2834 36 FP
Young, Charles H., 1301 N. 3rd, 66002
(367-4053)
23 M 1902 53 FP

ATTICA—316
(Tri-County Society)

Stone, Grant C., 215 W. Ave. D, 67009
(254-2191)
08 M 5605 35 FP

ATWOOD—913
(Northwest Kansas Society)

Henneberger, Charles E., 175 E. Court Pl., 67730
(626-3311)
86 M 4101 10 FP
Walton, Philip D., 216 S. 4th, 67730
(626-3322)
32 M 1902 63 FP

AUGUSTA—316
(Butler County Society)

Anderson, Dale W., Augusta Plaza, 67010
(775-5432)
30 M 1902 55 FP
Barber, James L., Augusta Plaza, 67010
(775-5432)
31 M 1902 57 FP
Boyle, Hugh H., Rt. #1, Box 205, 67010
(733-2122)
33 M 3806 60 PATH
Haffner, William N., 105 E. 5th, 67010
(775-5651)
35 M 1902 61 GS
Kelly, Robert H., R.R. #1, Box 205, 67010
(733-1394)
32 M 3806 59 PATH
Rombold, Charles R., R.R. 1, 67010
99 M 1606 24 OO

BAXTER SPRINGS—316
(Cherokee County Society)

Alquist, V. Dale, 21st & Fairview, 66713
(856-2400)
17 M 1902 42 GS
Chubb, Richard M., 445 E. 10th, 66713
(856-2444)
29 M 1606 54 FP
Clairborne, Richard H., III, 2201 Military Ave., 66713
(856-3535)
27 M 1902 53 FP

Mehaffy, Orville A., 411 E. 11th, 66713
(856-2383)
42 M 1902 69 FP

BELLEVILLE—913
(Republic County Society)

Beiderwell, Paul L., 2703 M Street, 66935
(527-2174)
08 M 3901 38 ADM
Chaney, Ernie J., 2303 Sunset Dr., 66935
(527-2237)
27 M 1902 56 FP
Doubek, Herbert D., 2316 "G" St., 66935
(527-2237)
28 M 1902 56 FP
Scott, Duane L., 1206 18th St., 66935
(527-2217)
34 M 1902 60 FP
Ward, James A., 1206 18th St., 66935
(527-2217)
34 M 1902 58 FP

BELOIT—913
(Mitchell County Society)

Dobratz, Robert A., 310 W. 8th, 67420
(738-2246)
24 M 1902 52 FP
Drake, Douglas J., 310 W. 8th, 67420
(738-2246)
43 M 1902 71 FP
Klenda, Martin B., 310 W. 8th, 67420
(738-2246)
38 M 1643 63 GS
Weltmer, Roger P., 112 W. Main, 67420
(738-2574)
18 M 1902 44 U

BLUE RAPIDS—913
(Northeast Kansas Society)

Lawless, Harold L., 607 Lincoln, 66411
(226-7202)
29 M 702 54 FP

BONNER SPRINGS—913
(Wyandotte County Society)

May, Kenneth L., 122 N. Nettleton, 66012
(422-2020)
20 M 1902 51 FP
Mitts, Ernest W., 122 N. Nettleton, 66012
(422-2020)
22 M 1902 51 FP
Waggoner, Franklin E., 122 N. Nettleton, 66012
(422-2020)
26 M 1902 61 FP

BUCKLIN—316
(Iroquois County Society)

Randle, Jack E., 67834
(826-3251)
24 M 1902 54 FP

BUHLER—316
(Reno County Society)

Friesen, Orlando J., 107 W. 2nd, 67522
(543-2330)
27 M 1902 56 FP

BURLINGTON—316
(Flint Hills Society)

McConnell, Archie B., 66839
(364-5732)
90 M 3901 15 FP

CALDWELL—316
(Tri-County Society)

Kinnan, Leon F., 523 S. Market, 67022
(845-6422)
18 M 3901 42 FP

CANEY—316
(Southeast Kansas Society)

Moore, Robert F., 4th & McGee, 67333
(879-2135)
28 M 1902 56 FP
Tyler, William F., 4th & McGee, 67333
(879-2167)
42 M 1902 68 FP

CEDAR VALE—316
(Southeast Kansas Society)

Cohnberg, Rosellen E., P.O. Box 398, 67024
(758-2266)
22 M 2802 47 FP PD

CENTRALIA—913
(Northeast Kansas Society)

Capsey, Roswell E., 122 Main, 66415
(857-3392)
04 M 1902 44 OO

CHANUTE—316
(Southeast Kansas Society)

Abbuehl, Don R., 505 S. Plummer, 66720
(431-2500)
18 M 1902 44 GS
Ashley, George L., 505 S. Plummer, 66720
(431-2500)
12 M 1902 37 GS
Ashley, Glen, 505 S. Plummer, 66720
(431-2500)
16 M 1902 43 FP
Baker, Henry K., 1501 W. 7th, 66720
(431-9310)
08 M 1606 35 GS
Dick, Henry J., Jr., 1501 W. 7th, 66720
(431-9310)
27 M 1902 58 FP
Gehrt, Earl B., 505 S. Plummer, 66720
(431-2500)
32 M 1902 62 FP
Hudson, James R., Neosho Memorial Hospital, 66720
(431-4000)
37 M 1902 63 R

Kihm, Albert A., 505 S. Plummer, 66720
(431-2500)
27 M 1902 55 FP

CHAPMAN—913
(Dickinson County Society)

Svoboda, Charles R., 413 N. Marshall, 67431
(922-6400)
18 M 1902 46 FP

CHERRYVALE—316
(Labette County Society)

Mekis, John, 216 E. 4th, 67335
(336-2134)
27 M 47302 53 FP

CHETOPA—316
(Labette County Society)

Peffly, Elmer D., 327 Maple, 67336
(236-7188)
22 M 3901 53 FP

CLAY CENTER—913
(Clay County Society)

Anderson, Severt A., 532 Lincoln, 67432
(632-3166)
07 M 1902 36 FP
Carleton, Richard C., 709 Liberty, 67432
(632-5603)
31 M 3005 61 FP
McIlvain, Guy B., 532 Lincoln, 67432
(632-2376)
97 M 1643 25 OO
McVay, R. Bruce, 1503 5th, 67432
(632-3542)
97 M 1902 29 OO
O'Donnell, Richard H., 709 Liberty, 67432
(632-3101)
16 M 1902 41 GS
Richards, Dennis D., 709 Liberty St., 67432
(632-5621)
34 M 1902 60 FP

CLYDE—913
(Cloud County Society)

Freeborn, Warren S., Jr., 66938
(446-2221)
26 M 1720 51 FP

COFFEYVILLE—316
(Southeast Kansas Society)

Bryant, Homer L., Box 844, 67337
(251-9597)
99 M 3501 30 OO
Campbell, William H., 1411 W. 4th, 67337
(251-3235)
39 M 1902 65 OPH
Coyle, John F., 209 W. 7th, 67337
(251-2400)
21 M 1902 44 FP
Dickinson, Charles R., 109 W. 7th, 67337
(251-1340)
20 M 1606 44 GS
Diver, Robert W., P.O. Box 288, 67337
(251-0688)
93 M 1902 24 OO
Ellis, Stephen S., 1411 W. 4th, 67337
(251-3360)
11 M 2802 36 GS
Grigsby, Kenneth R., 1613 W. 4th, 67337
(251-1530)
04 M 1643 30 GS
Howerter, Bernard E., Jr., 209 W. 7th, 67337
(251-4790)
43 M 1803 68 U
Jewell, Ross L., Box 718, 67337
(251-4510)
13 M 1902 56 FP
Low, Joseph H., 808 Willow, 67337
(251-5610)
05 M 1902 31 FP
Martin, Albert E., Jr., 702 Maple, 67337
(251-2350)
11 M 1902 37 FP
Read, William T., 1411 W. 4th, 67337
(251-1120)
16 M 2802 40 FP
Sandhu, Paul S., 209 W. 7th, 67337
(251-2450)
42 M 49508 65 GS
Uy, Wilson, 101 Tyler, 67337
(251-1200)
42 M 74801 67 PATH
Vakas, John L., 1508 W. 4th, 67337
(251-3443)
38 M 1902 65 IM
White, Donald C., Coffeyville Memorial Hosp., 67337
(251-1200)
35 M 3515 65 R
Wilson, James W., Coffeyville Memorial Hosp., 67337
(251-1200)
26 M 3901 58 PATH

COLBY—913
(Northwest Kansas Society)

Dahl, Asher W., Colby Clinic, P.O. Box 28, 67701
(462-3333)
28 M 1902 58 FP
Hildyard, Victor H., II, Colby Clinic, P.O. Box 28, 67701
(462-3332)
47 M 702 73 FP
Marshall, George D., Colby Clinic, P.O. Box 28, 67701
(462-3333)
09 M 1902 36 FP
Regier, LaDonna M., Colby Clinic, P.O. Box 28, 67701
(462-3332)
47 F 1902 73 FP
Smith, Floyd L., Jr., Colby Clinic, P.O. Box 28, 67701
(462-3333)
20 M 1902 44 FP

COLUMBUS—316
(Cherokee County Society)

Belcher, George D., 114 W. Pine, Box 309, 66725
(429-2557)
34 M 1902 60 FP

Jones, Forrest H., 219 S. Kansas, 66725
(429-3744)
25 M 1902 54 FP

COLWICH—316
(Sedgwick County Society)

Lies, Barthel N., 67030
(796-1255)
11 M 2834 37 FP

CONCORDIA—913
(Cloud County Society)

Bray, Avis P., 1010 3rd Ave., 66901
(243-1560)
17 F 702 54 FP
Foster, Charles G., 1010 3rd Ave., 66901
(243-1560)
21 M 4102 47 IM
Fowler, Wayne L., 332 W. 8th, 66901
(243-1560)
23 M 1720 47 IM
Gelvin, E. Raymond, 1010 3rd Ave., 66901
(243-1560)
03 M 3005 27 GS
Hawley, Raymond G., St. Joseph's Hosp., 66901
(243-1234)
39 M 1902 65 PATH
Hofer, DeWayne D., St. Joseph's Hospital, 66901
(243-1234)
36 M 1606 62 R
Kim, Yong W., 1010 3rd Ave., 66901
(243-1560)
28 M 58302 49 IM
Kosar, Clarence D., P.O. Box 362, 66901
(243-3389)
98 M 1902 26 OO
Lawton, Marvin K., 1010 3rd Ave., 66901
(243-1560)
31 M 3005 58 GS
McComas, Marmaduke D., Jr., 11th & Washington Sts. 66901
(243-2511)
16 M 1902 43 U
Nelson, Paul L., 1010 3rd Ave., 66901
(243-1560)
27 M 1902 55 PD
Nixon, R. Roy, 519 Washington, 66901
(243-1263)
32 M 1643 57 R
Owensby, Lindell C., 222½ W. 6th, 66901
(243-3386)
21 M 2802 44 OPH
Pearson, Marion C., 1010 3rd, 66901
(243-1560)
23 M 1720 48 GS
Ruzicka, Lawrence J., 1010 3rd Ave., 66901
(243-1560)
13 M 3005 40 ANES
Smith, Harvey S., 311 W. 10th, 66901
(243-1234)
13 M 2802 37 PATH
Stryker, Henry B., Jr., 1010 3rd Ave., 66901
(243-1560)
19 M 3501 44 IM
Thornton, Foxhall P., 1010 3rd Ave., 66901
(243-1560)
25 8 5101 50 IM

COTTONWOOD FALLS—316
(Flint Hills Society)

McKee, Leo F., 66845
(273-6681)
16 M 1902 39 FP

COUNCIL GROVE—316
(Flint Hills Society)

Barker, Royal A., 221 Hockaday, 66846
(767-5126)
21 M 1902 53 FP
Blackburn, Robert W., 221 Hockaday, 66846
(767-5126)
22 M 1902 49 FP
Schultz, James E., 221 Hockaday, 66846
(767-5126)
26 M 1902 56 FP

CUNNINGHAM—316
(Wyandotte Society)

Albritten, Frank F., 67035
(298-2542)
14 M 4101 38 OO

DENTON—913
(Northeast Kansas Society)

Yoder, Emerson D., 66017
(359-3375)
14 M 1902 49 FP

DERBY—316
(Sedgwick County Society)

McKerracher, Robert D., 400 N. Baltimore, 67037
(788-1779)
27 M 3901 55 FP
Moyer, Herman J., 200 S. Baltimore, 67037
(788-1484)
24 M 3901 55 FP

DeSOTO—913
(Johnson County Sociey)

Johnson, Edgar W., Jr., 415 E. 2nd, 66018
(585-1177)
18 M 1902 42 IM

DIGHTON—316
(Southwest Kansas Society)

Von Leonrod, George, Jr., Box 146, 67839
(397-5314)
16 M 1902 43 FP

DODGE CITY—316
(Ford County Society)

Baum, Arnold H., 2020 Central, 67801
(225-1371)
16 M 2101 44 OBG

Boles, R. Dale, 2020 Central, 67801
(225-1371)
22 M 3901 53 PD
Brownrigg, Richard L., 2020 Central, 67801
(225-1371)
35 M 1902 61 U
Busch, Anthony B., 806 2nd Ave., 67801
(227-3141)
05 M 2002 31 FP
Conard, Clair C., 2020 Central, 67801
(225-1371)
27 M 1902 55 IM
Doak, Roger S., 2020 Central, 67801
(227-1371)
39 M 2834 65 R
Fry, Luther L., 2206 First Ave., 67801
(225-0523)
41 M 1902 67 OPH
Jambor, James J., 304 Hwy. 56 W-Suite 2, 67801
(227-3213)
20 M 2307 46 D
Johnson, Howell D., 2020 Central, 67801
(225-1371)
45 M 1902 71 IM
McCoy, Ronald, 806 2nd Ave., 67801
(227-3141)
19 M 3901 47 FP
McElhinney, Charles F., 2020 Central, 67801
(225-1371)
36 M 1902 62 GS
Ohman, Richard J., 714 2nd Ave., 67801
(227-2106)
15 M 2407 41 GS
Schwartz, Eugene W., 617 2nd Ave., 67801
(225-4261)
24 M 1902 50 OPH
Speirs, Richard E., 2101 E. Crescent Dr., 67801
(227-6214)
10 M 1803 33 GS
Stockwell, Morgan U., 2020 Central, 67801
(225-1371)
24 M 1902 55 IM
Trekell, William V., 806 2nd Ave., 67801
(227-3141)
25 M 1902 52 GS
Williams, Evan R., 2020 Central, 67801
(225-1371)
25 M 1606 52 GS
Zacharias, Carl K., 2020 Central, 67801
(225-1371)
21 M 40707 47 ORS

EL DORADO—316
(Butler County Society)

Brian, Robert M., 300 S. Main, 67042
(321-1230)
02 M 1606 30 GS
Dellett, Kenneth B., 613 N. Main, 67042
(321-1910)
30 M 1902 55 OPH
Girod, Charles I., Walnut Valley St. Bk. Bldg., 67042
(321-4981)
11 M 4706 44 GS
Hammel, George W., 119 N. Jones, 67042
(321-5225)
08 M 1902 30 IM
Johnson, J. Harold, 300 S. Main, 67042
(321-3430)
99 M 401 27 EENT
Kassebaum, Glen E., 300 S. Main, 67042
(321-2710)
98 M 1606 23 GS
Lowry, Ray F., 226 W. Central, 67042
(321-9122)
13 M 1902 45 GS
Overholser, Norman H., 300 S. Main, 67042
(321-4505)
16 M 1902 41 FP
Proctor, Robert W., 119 N. Jones, 67042
(321-4550)
38 M 1902 63 FP
Shields, James M., Jr., 119 N. Jones, 67042
(321-2430)
18 M 4802 42 FP
White, Benjamin E., 119 N. Jones, 67042
(321-1450)
27 M 1902 54 FP
Williams, Gene V., 200 W. Ash, 67042
(321-6680)
23 M 1902 54 ENT

ELKHART—316
(Seward County Society)

Ramchandani, Ashok P., 551 Morton, 67950
(697-2122)
39 M 49555 64 GS

ELLINWOOD—316
(Barton County Society)

Law, Findley, Medical Arts Bldg., 67526
(564-2170)
22 M 1902 51 FP

ELLIS—913
(Central Kansas Society)

Surface, Gardner A., 1204 Washington, 67637
(726-4212)
02 M 1902 29 FP

ELLSWORTH—913
(Central Kansas Society)

Davis, George R., 308 Kingsley, 67439
(472-3121)
19 M 1902 44 GS
O'Donnell, H. St. Clair, 308 Kingsley, 67439
(472-3121)
93 M 2802 17 GS

Seitz, Joseph E., Jr., 308 Kingsley, 67439
(472-3121)
22 M 1902 46 FP

EMPORIA—316
(Flint Hills Society)

Augustyn, Loren L., R.R. #5, 66801
(343-1200)
30 M 3006 58 FP
Bradley, H. Russell, 1601 State, 66801
(343-2900)
35 M 1902 62 FP
Brockhouse, John P., 1601 State, 66801
(343-2900)
31 M 1902 57 IM
Burgeson, Frank, 1601 State, 66801
(343-2900)
40 M 3005 65 OPH
Butcher, Thomas P., 1128 Lawrence, 66801
(342-0722)
05 M 1601 34 GS
Campbell, Edward G., 1601 State, 66801
(343-2900)
31 M 1902 61 FP
Coldsmith, Donald C., 1024 W. 12th, 66801
(342-7047)
26 M 1902 58 FP
Conard, Richard F., Newman Hospital, 66801
(342-7722)
16 M 1902 42 R
Davis, David R., 1038 Lawrence, 66801
(342-0646)
02 M 2101 28 PD
Funes, Carlos A., 1601 State, 66801
(343-2900)
42 M 13205 66 U
Gann, E. Lamonte, 1128 Lawrence, 66801
(342-3542)
07 M 2802 37 EENT
Garcia, Gould C., 919 W. 12th, 66801
(342-2521)
32 M 3607 58 IM
Ginavan, Duane A., 1024 W. 12th, 66801
(342-5876)
35 M 1902 62 FP
Glenn, James N., 1130 Chestnut, 66801
(343-1191)
40 M 4804 66 ORS
Havenhill, Marshall A., II, 1601 State, 66801
(343-2900)
35 M 1902 61 OBG
Hopper, Charles R., 25 W. 5th, 66801
(342-2341)
17 M 1902 47 FP
Knecht, Stephen M., Newman Memorial Hosp., 66801
(342-7722)
44 M 1902 70 R
Lohmeyer, Kenneth L., 1024 W. 12th, 66801
(342-6622)
18 M 1902 44 FP
Luedtke, Walter E., 2026 Canterbury Road, 66801
(342-6593)
18 M 5605 43 PATH
Miguelino, Oliver M., Newman Memorial Hosp., 66801
(342-7120)
35 M 74801 57 PATH
Morgan, John L., 919 W. 12th, 66801
(342-2521)
15 M 4101 40 IM
Parker, Joseph W., Jr., 1348 Frontier Way, 66801
(342-0886)
01 M 1902 45 OO
Parker, Wayne G., State Teacher's College, 66801
(343-1200) Ext. 224
27 M 1902 56 FP
Peterson, Robert L., 25 W. 5th, 66801
(342-2341)
36 M 1902 62 FP
Ryan, Edward J., 919 W. 12th, 66801
(342-2521)
12 M 1902 36 IM
Saul, F. William, Newman Memorial Hospital, 66801
(342-7722)
07 M 4113 40 R
Schellinger, Richard P., 1128 Lawrence, 66801
(342-0722)
22 M 3005 49 GS
Snowbarger, Marvin D., 1601 State, 66801
(343-2900)
29 M 1902 55 FP
Traylor, David L., 1229 Rural, 66801
(342-6241)
17 M 1902 42 OBG
Trimble, David P., 517 Merchant, 66801
(342-2572)
04 M 1902 32 OPH
Underwood, Charles C., 25 W. 5th, 66801
(342-2341)
07 M 1902 32 IM
VanderVelde, Stanley L., 1601 State, 66801
(343-2900)
16 M 1902 43 GS

ERIE—316
(Neosho County Society)

Bryan, Emery C., 103 S. Main, 66733
(244-5111)
04 M 1902 32 FP
Weir, William C., 115 S. Main, 66733
(244-3771)
17 M 2501 42 FP

ESKRIDGE—913
(Flint Hills Society)

Walker, William H., Second & Cedar, 66423
(449-2301)
10 M 2401 38 IM

EUDORA—913
(Douglas County Society)

Holladay, Kenneth R., 101 W. 10th, 66025
(542-2345)
34 M 1902 58 FP

EUREKA—316
(Butler County Society)

Baird, C. Dryden, 202 N. Plum, 67045
(583-6608)
02 M 3901 27 OO

Basham, John H., 201 N. Main, 67045
(583-5554)
11 M 2802 36 FP

FORT SCOTT—316
(Bourbon County Society)

Akers, Guy I., 710 W. 8th, 66701
(223-3100)
20 M 1902 53 IM

Aldis, Henry, 710 W. 8th, 66701
(223-3100)
13 M 1902 41 OBG

Aldis, William, 710 W. 8th, 66701
(223-3100)
20 M 1902 44 GS

Basham, James J., 102 S. Judson, 66701
(223-4100)
14 M 1902 37 FP

Benage, John F., 710 W. 8th, 66701
(223-3100)
32 M 1902 58 OBG

Burke, James J., 710 W. 8th, 66701
(223-3100)
35 M 2834 61 IM

Chow, Stanley L. Y., Mercy Hospital, 66701
(223-2200)
18 M 24222 39 R

Dunshee, Carlyle M., 710 W. 8th, 66701
(223-3100)
32 M 1902 57 GS

Gettler, Dean T., 710 W. 8th, 66701
(223-3100)
31 M 1902 57 GS

Good, James T., Mercy Hospital, 66701
(223-2200)
21 M 2802 45 PATH

Irby, Addison C., 710 W. 8th, 66701
(223-3100)
05 M 1606 28 PD

Irby, Pratt, 710 W. 8th, 66701
(223-3100)
13 M 4705 36 U

McCann, Patrick E., 710 W. 8th, 66701
(223-3100)
28 M 1902 59 IM

McKenna, Michael J., 102 S. Judson, 66701
(223-4100)
38 M 1902 64 FP

Nelson, T. Eugene, 710 W. 8th, 66701
(223-3100)
41 M 1902 69 FP

Reeves, Charles S., 710 W. 8th, 66701
(223-3100)
37 M 1902 63 IM

Stone, Francis M., Jr., 710 W. 8th, 66701
(223-3100)
15 M 2101 41 ENT

Weddle, Douglas P., 710 W. 8th, 66701
(223-3100)
43 M 1720 69 FP

FORT LEAVENWORTH—913
(Leavenworth County Society)

Allan, Michael A., 12 5th Artillery Rd., 66027
(684-4157)
41 M 3840 69 OTO

FREDONIA—316
(Southeast Kansas Society)

Bayles, Hugh G., 716 Madison, 67736
(378-3412)
25 M 1902 52 FP

Beal, Raymond J., 600 Madison, 66736
(378-2159)
12 M 1902 38 GS

Hayden, A. Mary, 617 Monroe, 66736
(378-2751)
88 F 1902 35 OO

Sumner, Ralph N., 712 Madison, 66736
(378-2311)
31 M 1902 57 FP

GARDEN CITY—316
(Southwest Kansas Society)

Austin, John O., 601 N. 6th, 67846
(276-2346)
14 M 1601 40 FP

Barnard, James A., III, 1503 E. Fulton Terr., 67846
(276-8201)
31 M 4812 62 FP

Beggs, David F., 609 N. 5th, 67846
(276-9211)
39 M 1902 64 IM

Bigler, F. Calvin, 611 N. 5th 67846
(276-9211)
31 M 801 57 S

Bruno, James W., 1133 Kansas Plaza, 67846
(276-8201)
40 M 4706 66 FP

Crispen, John W., 630 Briar Hill Dr., 67846
(275-4840)
38 M 4101 66 GS

Dickerson, Robert M., 609 N. 5th, 67846
(276-9211)
34 M 1902 64 IM

Eichhorn, Frank D., 719 Kansas Plaza, 67846
(276-8132)
25 M 1902 56 FP

Fenton, Robert M., 1133 Kansas Plaza, 67846
(276-8201)
20 M 1902 54 FP

Greenburg, George E., 2409 Belmont, 67846
(276-9586)
42 M 401 68 R

Heard, Kenneth M., 1109 Pershing, 67846
(276-3694)
21 M 4706 44 PATH

Hernandez, Alexander M., 608 N. 5th, 67846
(276-8141)
33 M 84704 59 P

Hunsberger, Terry, D.O., 509 N. 6th, 67846
(276-7646)
47 M 2840 72 FP
Jumper, Jerry L., D.O., 509 N. 6th, 67846
(276-7646)
42 M 2840 70 FP
Maxfield, Russell J., 1503 E. Fulton Terr., 67846
(276-9171)
16 M 1902 41 FP
Mendoza, Ramon A., 509 N. 6th, 67846
(276-3478)
35 M 84704 FP
Mimoso, Jose J., 808 E. Thompson, 67846
(275-4649)
37 M 4201 61 OBG
Rodriguez, Paul L., 608 N. 5th, 67846
(276-8241)
39 M 4706 66 R
Schmidt, Ramon W., 611 N. 5th, 67846
(276-9211)
39 M 1902 65 GS
Spikes, Marion E., 634 Wheatridge, 67846
(276-7243)
26 M 1902 62 OO
Teare, Max E., 156 Garden Dale, 67846
(276-7689)
28 M 1902 54 P
Turner, John W., 210 E. Spruce, 67846
(276-3292)
13 M 1902 39 FP
Wiley, Horace M., 602 N. 6th, 67846
(276-6901)
12 M 2802 40 GS
Zeller, Myron J., 1133 Kansas Plaza, 67846
(276-8201)
38 M 1902 64 OM

GARDEN PLAIN—316
(Sedgwick County Society)

Biermann, Aloysius H., 67050
(535-2231)
99 M 3006 23 FP

GARDNER—913
(Johnson County Society)

Abdullah, Syed M., 427 W. Main, 66030
(884-8711)
42 M 70401 65 GS
Billingsley, John A., Jr., 427 W. Main, 66030
(884-8711)
31 M 1902 54 FP
Moore, Chester E., 136 E. Main, 66030
(884-7822)
14 M 1902 51 FP
Reece, Adelbert S., 237 W. Main, 66030
(884-8221)
01 M 1902 29 OO
Reece, A. Thomen, 427 W. Main, 66030
(884-8711)
37 M 1902 63 FP
Reece, Carol A., 427 W. Main, 66030
(884-8711)
37 F 1902 63 PD

GARNETT—913
(Anderson County Society)

Dougherty, Thomas M., 117 W. 6th, 66032
(448-5421)
28 M 1902 55 FP
Harris, Claib B., Jr., 320 S. Oak, 66032
(448-5431)
17 M 1902 44 FP
Leitch, David A., 117 W. 6th, 66032
(448-5421)
38 M 1902 63 FP
Stevens, Mildred J., 202 W. 4th, 66032
(448-5454)
23 F 1902 47 FP
Stevens, Robert L., 202 W. 4th, 66032
(448-5454)
23 M 1902 47 FP

GIRARD—316
(Crawford County Society)

Friggeri, Robert W., 111 N. Summit, 66743
(724-8723)
23 M 1902 51 FP

GLASCO—913
(Cloud County Society)

Harwood, Claude J., Box 428, 67445
(568-2342)
25 M 1902 55 FP

GOESSEL—316
(Marion County Society)

Canellos, James, Goessel Clinic, 67053
(367-2205)
30 M 86902 62 FP
Ratzlaff, Abraham K., Goessel Clinic, 67053
(367-2205)
06 M 1902 33 FP

GOODLAND—913
(Northwest Kansas Society)

Austin, Kenneth D., 520 Main, 67735
(899-3633)
33 M 3005 63 FP
Bare, Lawrence E., 520 Main, 67735
(899-3633)
37 M 3901 70 FP
Olson, Clitus W., 520 Main, 67735
(899-3633)
16 M 3005 48 GS
Renner, Marion J., 417 West 9th, 67735
(899-5178)
96 M 1902 22 OO

GREAT BEND—316
(Barton County Society)

Anderson, Lyle B., 1017-A Jackson, 67530
(793-8141)
28 M 1902 60 FP

Beahm, Anol W., 3923 Broadway, 67530
(793-7827)
16 M 1902 43 FP
Brown, Reiff, 1400 Polk, 67530
(792-4391)
31 M 3901 57 ORS
Caple, Elbert M., 3515 Broadway, 67530
(792-2511)
34 M 1902 64 ANES
Cavanaugh, Clair J., 3515 Broadway, 67530
(792-2617)
23 M 1803 47 R
Copening, Tell B., 2111 Forest Ave., 67530
(793-3591)
43 M 1902 69 FP
Degner, James B., 3515 Broadway, 67530
(792-2617)
31 M 1902 57 R
Evans, William R., 3923 Broadway, 67530
(793-3574)
25 M 1902 53 FP
Holt, John M., 2200 Lakin, 67530
(793-8429)
35 M 1902 61 IM
Jones, Edward L., 3515 Broadway, 67530
(792-2511)
35 M 1902 61 PATH
King, William T., 3414 Forest, 67530
(793-3501)
35 M 1902 61 OBG
Kirby, Merlin G., 1012 Washington St., 67530
(793-3091)
31 M 1902 56 GS
Krueger, Haven C., 1023 Jackson Sq., 67530
(792-2163)
32 M 1902 61 PD
Liggett, Byron T., 1723 Williams, 67530
(792-2814)
30 M 1902 63 N
McAllaster, Wendale E., 2111 Forest, 67530
(793-3591)
24 M 1902 54 GS
Niederee, W. Curtis, 1012 Washington, 67530
(793-3091)
30 M 3006 56 GS
Polson, Robert C., 1422 Polk, 67530
(793-8414)
17 M 1902 42 OPH
Replogle, Charles B., 2111 Forest, 67530
(793-3591)
27 M 1902 53 FP
Russell, Homer B., 1912 17th St., 67530
(793-8124)
16 M 1606 42 GS
Sayler, Jerome, 3515 Broadway, 67530
(792-2511)
20 M 4113 50 PATH
Scott, John C., Box 1068, 67530
(793-3231)
26 M 1902 59 U
Shivel, David G., 3523 Forest, 67530
(793-3523)
28 M 1902 55 FP
Swan, Major M., 3923 Broadway, 67530
(792-4540)
06 M 1902 43 IM
Unrein, Robert J., 1017-A Jackson, 67530
(792-2504)
29 M 1902 58 GP
White, Charles L., 2412 Dove Terr., 67530
(792-4763)
06 M 1902 36 OO
Wiggs, James W., 3515 Broadway, 67530
(792-2511)
36 M 1720 63 N

GREENSBURG—316
(Iroquois County Society)

Bradley, J. Roderick, 502 S. Walnut, 67054
(723-2127)
23 M 1902 47 FP
Waldorf, Melvin H., Jr., 502 S. Walnut, 67054
(723-2127)
23 M 1902 47 FP

HALSTEAD—316
(Harvey County Society)

Aillon, Alejandro J., Hertzler Clinic, 67056
(835-2241)
39 M 26402 63 TS
Bailey, Colin, Hertzler Clinic, 67056
(835-2241)
33 M 35205 59 GYN
Boudreaux, V. J., Jr., Hertzler Clinic, 67056
(835-2241)
37 M 48-12 64 R
Burnett, A. Dean, Hertzler Clinic, 67056
(835-2241)
21 M 1902 52 GS
Decker, Donald D., Hertzler Clinic, 67056
(835-2241)
31 M 1902 56 CD
Dreese, William C., Hertzler Clinic, 67056
(835-2241)
16 M 1902 42 GS
Gradinger, Billens C., Hertzler Clinic, 67056
(835-2241)
06 M 1902 34 GE
Harms, Wilmer A., Hertzler Clinic 67056
(835-2241)
22 M 1902 56 OPH
Holt, Robert G., Hertzler Clinic, 67056
(835-2241)
22 M 5104 44 OPH
Hoofer, Wilford D., Hertzler Clinic, 67056
(835-2241)
30 M 1902 55 TS
Koeneke, Irene A., Hertzler Clinic, 67056
(835-2241)
98 F 2802 27 GS

Malone, Eugene M., Hertzler Clinic, 67056
(835-2241)
23 M 1902 56 IM
McReynolds, C. R., Hertzler Clinic 67056
(835-2241)
21 M 3840 47 PATH
Montgomery-Short, Ruth, Hertzler Clinic, 67056
(835-2241)
10 F 1902 37 OTO
Morton, John E., Hertzler Clinic, 67056
(835-2241)
99 M 35211 26 P
O'Grady, Joseph A., Hertzler Clinic, 67056
(835-2241)
16 M 3545 41 IM
Peckenschneider, Lloyd E., 418 Poplar, 67056
(835-2283)
98 M 1803 24 OO
Pokorny, Charles, Hertzler Clinic, 67056
(835-2241)
08 M 2834 34 IM
Rate, Robert G., Hertzler Clinic, 67056
(835-2241)
14 M 1803 39 S
Rizza, Robert G., Hertzler Clinic, 67056
(835-2241)
30 M 1201 56 PD
Sharfuddin, Shah, Hertzler Clinic, 67056
(835-2241)
31 M 70401 58 IM
Stoffer, Robert P., Hertzler Clinic, 67056
(835-2241)
26 M 1902 48 IM
Tan, Poly, Hertzler Clinic, 67056
(835-2241)
44 M 3901 69 P
Tejano, Neonilo A., Hertzler Clinic, 67056
(835-2241)
43 M 74808 67 ORS
Welch, Jack W., Hertzler Clinic, 67056
(835-2241)
18 M 1902 51 GS

HANOVER—913
(Northeast Kansas Society)

Warren, Linda D., Box 38, 66945
(337-2214)
44 F 1902 70 FP
Warren, Roger D., Box 38, 66945
(337-2214)
31 M 1902 57 GS

HARPER—316
(Tri-County Society)

Bellar, Ralph E., Joslin Hospital, 67058
(896-3131)
31 M 3005 60 FP
Hostetler, George M., 1019 Central, 67058
(896-3131)
27 M 5104 59 FP

HAVEN—316
(Reno County Society)

Haines, Chester W., 102 Sunset Ln., 67543
(465-3338)
01 M 1606 28 OO

HAYS—913
(Central Kansas Society)

Applegate, Francis R., 1010 Downing, 67601
(628-8218)
30 M 1902 55 OPH
Artman, John C., 111 W. 10th, 67601
(625-2518)
24 M 2002 48 FP
Bula, Ralph E., 105 W. 13th, 67601
(625-2551)
12 M 1902 37 A
Carlson, Earl V., 2818 N. Vine, 67601
(628-8221)
31 M 3005 56 ORS
Cecil, John, III, 203 W. 34th, 67601
(625-6521)
43 M 4804 69 R
Chavalithamrong, Hansa, 105 W. 13th, 67601
(625-2551)
45 M 89101 69 OBG
Cramm, Russell E., 111 W. 10th, 67601
(625-2518)
30 M 1902 56 S
Eddy, Murray C., 2001 Lincoln Dr., 67601
(625-9633)
98 M 1601 26 OO
Eddy, Victor M., 105 W. 13th, 67601
(625-2551)
29 M 1902 55 GS
Flanders, H. Alden, 2901 Ash, 67601
(625-3441)
20 M 1902 44 IM
Haigler, James P., 234 W. 11th, 67601
(625-2537)
13 M 3006 39 FP
Halling, L. William, Hays Pathology Lab., 67601
(625-5646)
27 M 5002 57 PATH
Hilgers, Jack E., 105 W. 13th, 67601
(625-2551)
22 M 2802 47 GS
Hull, Norman E., 201 W. 25th, 67601
(625-2518)
25 M 1902 52 FP
Hutchison, Glen C., 3200 Country Lane, 67601
(628-1160)
21 M 1902 50 ANES
Kane, William M., Jr., 105 W. 13th, 67601
(625-2551)
27 M 1001 54 OBG
Mattick, Irvin H., 2818 N. Vine, 67601
(628-8221)
18 M 2802 43 ORS
Medina, Anibal, First National Towers, 67601
(628-1019)
34 M 45101 62 U

Neil, Roy, Hays Path. Lab., 67601
(625-5646)
38 M 3005 65 PATH
Reynolds, Jeffrey C., 412 First Natl. Bank Bldg., 67601
(625-7311)
39 M 1902 64 ENT
Reynolds, Lloyd W., 111 W. 10th, 67601
(625-2518)
10 M 3840 34 GS
Siler, Eugene T., 1010 Downing, 67601
(628-8218)
24 M 1902 52 OPH
Stump, Harl G., 2717 Canal Blvd., 67601
(628-2826)
39 M 1902 65 GS
Tovar, Manuel H., 2717 Canal Blvd., 67601
(625-3457)
39 M 26404 67 FP
Watts, Harry E., 1010 Downing, 67601
(628-8218)
27 M 702 54 OPH
Wenzel, Anna M., 204 W. 17th, 67601
(625-3736)
95 F 1902 27 OO
Wiegman, Hugh A., 105 W. 13th, 67601
(628-1808)
34 M 1803 60 ENT

HAYSVILLE—316
(Sedgwick County Society)

Morgan, Nova L., 301 W. Grand, 67060
(524-3275)
20 M 3901 50 FP

HERINGTON—913
(Dickinson County Society)

Dozier, Fred S., 4 West Main, 67449
(258-2215)
10 M 4804 34 ANES
Gilliland, James O., 4 W. Main, 67449
(258-2215)
08 M 3901 32 FP

HESSTON—316
(Harvey County Society)

Diener, Clayton H., 101 W. Vesper, 67062
(327-4122)
18 M 1902 54 GS
Friesen, Florence C., Schowalter Villa, 67062
(327-4867)
87 F 1611 14 OO

HIAWATHA—913
(Northeast Kansas Society)

Duckett, Thomas G., 314 Oregon, 66434
(742-2161)
10 M 1902 34 GS
Larson, Delbert L., 314 Oregon, 66434
(742-2161)
30 M 1803 64 FP



Pro-Banthine®
brand of
propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted. Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 481

"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action—Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action—Pro-Banthine helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action—Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action—Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthine®
(propantheline bromide)

a good option in peptic ulcer

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

makes sense



For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* WARNING

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

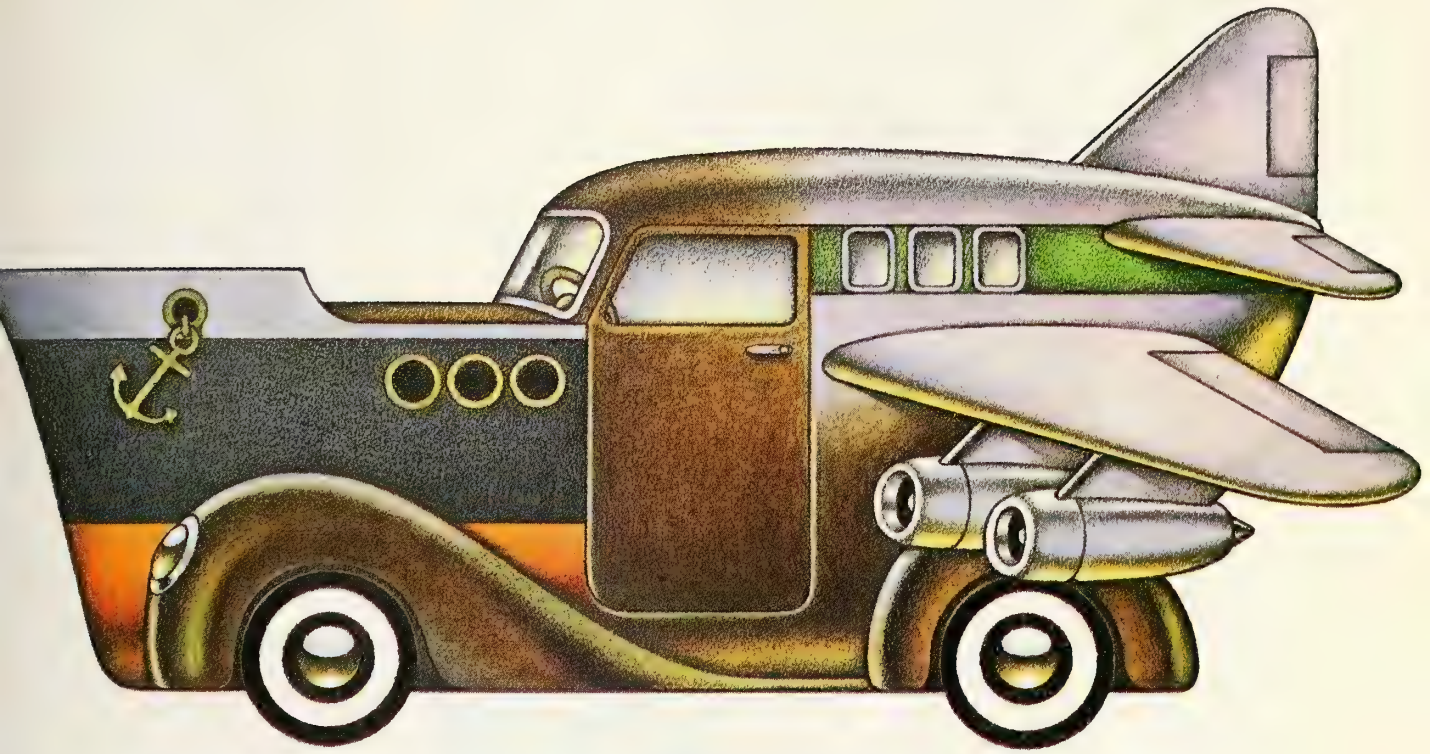
Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630

Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance. Hydrochlorothiazide to help keep blood pressure down and triamterene to help keep potassium levels up.



On land, sea, and in the air...

Up to 24 hours of effective control with a single dose...in nausea, vomiting and dizziness associated with motion sickness.

Dosage: 25 to 50 mg. 1 hour before travel.

Available on prescription only.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25 Chewable Tablets
(meclizine HCl) 25 mg.
for motion sickness

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?



Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

Lowe, DeWitt S., 202 S. 6th, 66434
(742-2117)
99 M 3006 28 FP
Meidinger, Ray, 120 N. 6th, 66434
(742-2135)
03 M 3005 32 FP

HIGHLAND—913
(Northeast Kansas Society)

Corder, Robert L., 66035
(442-3341)
23 M 1902 49 FP

HILL CITY—913
(Northwest Kansas Society)

Kobler, Carl D., 513 N. 10th, 67642
(674-2191)
23 M 1902 49 FP
Reddy, P. Jagannadha, 15 Walnut Dr., 67642
(674-2255)
42 M 49511 66 FP
Suwanabhand, Chalaw, 615 N. Pomeroy, 67642
(674-2255)
32 M 89101 57 FP

HILLSBORO—316
(Marion County Society)

Ens, G. George, 613 S. Main, 67063
(947-5931)
20 M 1902 55 FP
Ens, Peter D., 202 S. Wilson, 67063
(947-3671)
14 M 1902 51 FP
Franz, Robert G., 704 S. Main, 67063
(947-3197)
33 M 3901 59 FP
Janzen, Herman F., 128 S. Main, 67063
(747-3664)
91 M 1902 35 OO
Loewen, Peter S., Salem Hospital, 67063
(947-3114)
91 M 1902 30 OO

HOISINGTON—316
(Barton County Society)

Moore, Robert, 814 N. Elm, 67544
(653-2151)
22 M 3901 53 FP
Wolfenbarger, Keith A., 351 W. 10th, 67544
(653-4145)
27 M 1902 58 FP

HOLTON—913
(Jackson County Society)

Moser, Ernest C., 824 Kansas, 66436
(364-3230)
09 M 1902 34 OO
Moser, M. Ross, 418 W. 5th, 66436
(364-3116)
19 M 1902 47 FP
Moser, Roy H., 801 Iowa, 66436
(364-3240)
04 M 1902 32 OO
Seeley, James C., 418 W. 5th, 66436
(364-3116)
34 M 1902 64 FP

HORTON—913
(Northeast Kansas Society)

Wood, Robert D., 1205 1st Ave. E., 66439
(486-2127)
26 M 1902 53 FP

HOXIE—913
(Northwest Kansas Society)

Neuenschwander, John R., 700 Main, 67740
(675-3292)
26 M 2802 51 FP

HUGOTON—316
(Seward County Society)

Frederick, Mac F., 104 W. 6th, 67951
(544-2784)
20 M 1902 44 FP
LeNeve, Robert T., 104 W. 6th, 67951
(544-2784)
21 M 3901 46 FP

HUMBOLDT—316
(Southeast Kansas Society)

Long, Edward E., 8th & New York, 66748
(473-2411)
21 M 1902 50 FP
Mih, Alexander W. S., 624 Bridge, 66748
(473-3205)
22 M 24209 47 FP

HUTCHINSON—316
(Reno County Society)

Adams, Marcus W., 1125 N. Main, 67501
(663-6121)
33 M 3901 59 PD
Albright, Jerold D., 1125 N. Main, 67501
(663-6121)
39 M 1902 66 FP
Anderson, David G., 2415 N. Main, 67501
(663-4406)
35 M 1602 61 ORS
Bauer, Thomas A., 1125 N. Main, 67501
(663-6121)
41 M 1902 67 IM
Bautts, Don R., 17 W. 2nd, 67501
(662-2305)
32 M 401 55 OPH
Blank, John N., 711 Wolcott Bldg., 67501
(663-4271)
07 M 1902 38 FP
Borra, Mario J., 1 W. 8th, 67501
(662-1751)
24 M 2401 47 U

Bos, Norman C., 2415 N. Main, 67501
(663-4406)
24 M 1611 47 ORS

Boyd, G. Bryant, 1100 N. Main, 67501
(663-1251)
44 M 3901 70 FP

Brownlee, John J., 700 Monterey Place, 67501
(665-5724)
83 M 1902 11 OO

Burger, J. Dale, 1125 N. Main, 67501
(663-6121)
21 M 1902 46 FP

Casady, Gilbert N., 39 Linksland Dr., 67501
(663-3657)
23 M 1902 53 ANES

Coker, Grady N., Jr., 1100 N. Main, 67501
(663-1146)
24 M 1201 54 OBG

Crawford, Robert A., 1125 N. Main, 67501
(663-6121)
16 M 1601 42 FP

Depenbusch, Francis L., 504 Wolcott Bldg., 67501
(663-5981)
38 M 1902 65 OPH

Eckart, DeMerle E., 312 Wolcott Bldg., 67501
(662-4921)
14 M 1902 40 P

Falter, Richard T., 512 Wolcott Bldg., 67501
(663-5981)
38 M 1902 67 OPH

Fernie, Robert W., 2100 N. Madison, 67501
(663-1136)
06 M 702 34 IM

Goodpasture, W. Carter, 1125 N. Main, 67501
(662-0478)
10 M 1602 36 IM

Greever, Boyd L., 129 W. 19th, 67501
(662-3944)
92 M 2834 18 OO

Hall, Clarence W., 101 W. 19th, 67501
(665-6912)
87 M 1606 11 OO

Hedrick, Kenneth E., 1125 N. Main, 67501
(663-6121)
27 M 1902 53 GS

Hill, John J., 519 Wiley Bldg., 67501
(662-1291)
16 M 1902 44 OTO

Hinshaw, Charles T., Jr., 725 N. Main, 67501
(662-7801)
32 M 1902 58 PATH

Hodes, Herbert C., 1100 N. Main, 67501
(663-1146)
43 M 1902 69 OBG

Holderman, Wallace D., 2415 N. Main, 67501
(663-4406)
28 M 1902 54 ORS

Jarrott, John B., 2415 N. Main, 67501
(663-4406)
16 M 1902 40 ORS

Jones, Sam, 517 32nd Terr., 67501
(662-6753)
13 M 2802 39 OO

Lettner, Hans T., 725 N. Main, 67501
(662-7801)
23 M 40716 49 PATH

Lukens, David, 1100 N. Main, 67501
(663-1136)
24 M 2307 48 IM

Masterson, Melvin L., 2709 Tyler, 67501
(663-1817)
23 M 4901 48 R

McCoy, Charles T., 310 Wolcott Bldg., 67501
(662-0121)
16 M 1902 41 OPH

McMullen, Joseph E., 1125 N. Main, 67501
(663-6121)
33 M 1902 62 GS

Mershon, H. Ruth, 308 W. 20th, 67501
(665-7291)
24 F 3901 49 ANES

Moe, Frederick H., 2100 N. Jackson, 67501
(663-2108)
31 M 40710 62 P

Moorman, Victor R., 521 Wiley Bldg., 67501
(662-4458)
15 M 1902 40 OTO

Mull, John C., 1125 N. Main, 67501
(663-6121)
34 M 1902 61 OBG

Neel, Wilbur B., 1125 N. Main, 67501
(663-6121)
24 M 1902 59 IM

Nunemaker, Marion E., 919 N. Main, 67501
(662-5391)
21 M 1902 46 ANES

Openshaw, Calvin R., 1100 N. Main, 67501
(662-3305)
21 M 4901 44 GS

Paine, George E., 220 W. 23rd, 67501
(662-7434)
94 M 1606 19 OO

Perkins, Jack L., 1125 N. Main, 67501
(663-6121)
24 M 1902 53 FP

Schroll, Jack C., 1125 N. Main, 67501
(663-6121)
24 M 1902 49 OBG

Schultz, Wayne H., P.O. Box 274, 67501
(662-4648)
26 M 2802 54 R

Shaw, James W., Jr., P.O. Box 1646, 67501
(662-7801)
40 M 1902 65 PATH

Shears, Robert N., 1100 N. Main, 67501
(662-3364)
20 M 1902 44 PD

Spitzer, Jerome S., 1100 N. Main, 67501
(663-1251)
33 M 3005 59 FP

Stafford, Robert W., 1125 N. Main, 67501
(663-6121)
43 M 2101 69 IM
Stensaas, Carl O., 401 Wolcott Bldg., 67501
(663-9147)
10 M 1902 38 D
Stout, James M., 1125 N. Main, 67501
(663-6121)
29 M 1902 55 FP
Sumner, Joyce R., 2703 N. Van Buren, 67501
(662-0822)
26 F 1902 51 ANES
Sumner, Marion M., 1125 N. Main, 67501
(663-6121)
26 M 1902 52 IM
Tarm, Felix, 1100 N. Main, 67501
(663-1136)
39 M 1803 65 IM
Taylor, Elwyn J., 1100 N. Main, 67501
(663-1251)
34 M 1902 61 FP
Tweito, David H., 1100 N. Main, 67501
(662-3364)
38 M 1803 64 PD
Von Ruden, William J., 1100 N. Main, 67501
(662-3305)
26 M 1611 52 GS
Wortman, Jack A., 1125 N. Main, 67501
(663-6121)
34 M 1902 62 IM

INDEPENDENCE—316
(Southeast Kansas Society)

Bair, Albert E., 800 W. Chestnut, 67301
(331-6560)
16 M 1902 44 GS
Barbera, Porter E., 800 W. Chestnut, 67301
(331-4400)
19 M 4707 46 FP
Beahm, Edgar H., 307 Professional Bldg., 67301
(331-2311)
13 M 1902 44 FP
Bullock, Harold O., 219 W. Myrtle, 67301
(331-5550)
06 M 1902 33 IM
Chappuie, William G., 800 W. Chestnut, 67301
(331-5440)
24 M 1902 51 FP
Empson, Charles L., P.O. Box 635, 67301
(331-6019)
37 M 1902 68 FP
Knuth, Kenneth L., 313 Crestview Dr., 67301
(331-2200)
22 M 1902 50 R
Myers, Earl B., Jr., 800 W. Chestnut, 67301
(331-3420)
32 M 2803 64 S
Robinson, Edgar L., 209 N. 6th, 67301
(331-1450)
15 M 1902 42 FP

IOLA—316
(Allen County Society)

DeTar, George, 219 W. Madison, 66749
(365-3712)
28 M 1902 57 GS
Lenski, Frank X., Jr., 206 S. Jefferson, 66749
(365-3901)
26 M 1606 49 FP
Myers, W. Eugene, 211 South St., 66749
(365-3732)
12 M 1902 46 FP
Pees, Gerald B., 219 W. Madison, 66749
(365-5175)
15 M 1902 43 FP
Schmaus, Lyle F., 202 E St., 66749
(365-3611)
99 M 1803 26 IM

JETMORE—316
(Ford County Society)

O'Shea, James G., Jr., Box 321, 67854
(357-4931)
18 M 3901 48 FP

JEWELL—913
(Mitchell County Society)

Plowman, Carl W., 66949
(428-3511)
99 M 1606 26 FP

JUNCTION CITY—913
(Geary County Society)

Bollman, Charles S., Med. Clinic Bldg., 66441
(762-4575)
41 M 3901 66 GS
Brethour, Leslie J., 528 N. Jefferson, 66441
(238-4151)
13 M 3006 39 FP
Bunker, Herbert L., Jr., 227 W. 7th, 66441
(238-5131)
20 M 1606 45 FP
Carr, Walter A., 118 W. 8th, Box 785, 66441
(235-6589)
77 M 1606 05 OO
Labhsetwar, S. A., Med. Clinic Bldg., 66441
(762-4147)
39 M 49528 64 OBG
Minnick, Charles V., 602 N. Jefferson, 66441
(762-2051)
08 M 2105 35 FP
O'Donnell, Harry E., 227 W. 7th, 66441
(238-5131)
14 M 4113 42 FP
Scott, Alex, 507 W. 6th, 66441
(238-2518)
23 M 5605 48 FP
Smiley, William A., 520 N. Jefferson, 66441
(238-4151)
85 M 1903 10 FP

KANSAS CITY, KANSAS—913
(Wyandotte County Society)

Abrams, William W., 857 Brotherhood Bldg., 66101
(281-3660)
06 M 1902 32 IM

Alexander, Clyde W., 1514 N. 5th, 66101
(281-4380)
96 M 4707 23 FP

Algie, William H., 314 Huron Bldg., 66101
(281-2929)
02 M 1902 27 IM

Allen, James E., K.U. Med. Center, 66103
(831-5000)
46 M 1902 72 RES (IM)

Allen, Max S., K.U. Med. Center, 66103
(831-6988)
11 M 1902 37 IM

Amare, Mammo, K.U. Med. Center, 66103
(831-6031)
36 M 60501 61 IM

Arvanitakis, Constantine, K.U. Med. Center, 66103
(831-6990)
39 M 41802 65 IM

Asher, Marc A., K.U. Med. Center, 66103
(831-6130)
36 M 1902 62 ORS

Azarnoff, Daniel L., K.U. Med. Center, 66103
(831-6026)
26 M 1902 55 IM

Becker, Leslie E., 600 Nebraska, 66101
(342-4010)
23 M 1003 46 U

Bettinger, Irene E. H., K.U. Med. Center, 66103
(831-6970)
41 F 4101 66 N

Bichlmeier, Franklin G., 115 S. 18th, 66102
(371-6800)
33 M 1902 58 TS

Bidwell, Jo Jeanne, K.U. Med. Center, 66103
(831-6464)
33 F 1902 66 P

Billingsley, John A., Sr., 1225 N. 78th, 66112
(299-0330)
97 M 1902 28 OPH

Boggan, Michael D., 155 S. 18th, 66102
(371-6800)
40 M 1201 67 CDS

Bolinger, Robert E., K.U. Med. Center, 66103
(831-6022)
19 M 1902 43 IM

Bolton, Victor E., 155 S. 18th, 66102
(371-2020)
24 M 1902 48 OBG

Bone, Roger C., K.U. Med. Center, 66103
(831-6044)
41 M 401 67 PUD

Bosilevac, Fred N., 155 S. 18th, 66102
(342-4843)
16 M 1902 44 OPH

Brackett, Charles E., K.U. Med. Center, 66103
(831-6117)
20 M 3501 44 NS

Brathwaite, Harold M., 10 N. James, 66101
(281-3815)
87 M 1003 FP

Brillhart, Maxine T., 1610 Washington Blvd., 66102
(321-4800)
15 F 1902 50 FP

Brown, Robert W., K.U. Med. Center, 66103
(831-5100)
23 M 1902 55 IM

Brymer, James F., K.U. Med. Center, 66103
(831-6015)
39 M 2501 65 CD

Buakham, Chana, K.U. Med. Center, 66103
(831-6670)
37 M 89102 62 ANES

Burger, William E., 355 New Brotherhood Bldg., 66101
(371-1017)
22 M 3006 51 GS

Burket, George E., Jr., K.U. Med. Center, 66103
(831-6907)
12 M 1902 37 FP

Cameron, William J., K.U. Med. Center, 66103
(831-6200)
29 M 2501 54 OBG

Carpenter, Paul R., 155 S. 18th, 66102
(371-6800)
24 M 1902 50 TS

Carter, Robert P., Jr., K.U. Med. Center, 66103
(831-6219)
40 M 3901 65 OBG

Casteel, Charles K., 155 S. 18th, 66102
(342-7233)
34 M 3901 59 U

Chalian, Alexander R., 2648 Minnesota, 66102
(371-0307)
03 M 3509 37 ANES

Chang, C. H. Joseph, K.U. Medical Center, 66103
(831-6800)
29 M 58301 53 R

Chin, Tom D. Y., K.U. Med. Center, 66103
(831-7175)
22 M 2501 43 IM

Cho, Cheng T., K.U. Med. Center, 66103
(831-6300)
37 M 38501 62 PD

Christian, Stanley J., 1003 Central, 66102
(371-1181)
18 M 1902 44 FP

Chun, Chung S., K.U. Med. Center, 66103
(831-6324)
30 F 58301 53 PD

Coale, Lloyd H., 5020 Greeley, 66104
(287-4748)
13 M 1902 43 IM

Cooper, Leo F., K.U. Med. Center, 66103
(831-6766)
15 M 1902 53 FP

Couch, James R., Jr., K.U. Med. Center, 66103 (831-6970)
39 M 4804 65 N
Cox, Wallace F., 1854 Minnesota, 66102 (321-1199)
30 M 1902 56 GS
Craig, Charles C., 3209 Francis Pl., 66103 (262-2573)
45 M 1902 71 RES (ORS)
Crist, Robert D., K.U. Med. Center, 66103 (831-6200)
36 M 1902 63 OBG
Crockett, Charles A., 155 S. 18th, 66102 (342-2200)
19 M 401 44 OPH
Cronemeyer, Richard L., K.U. Med. Center, 66103 (432-2654)
52 M Med. Student
Culp, Louis M., 1645 Washington, 66102 (371-1077)
24 M 1902 53 FP
Davis, Christopher G., 905 N. 7th, 66101 (321-9313)
09 M 1902 39 FP
Davis, James W., Jr., K.U. Med. Center, 66103 (861-4700)
33 M 4705 57 IM
Day, Hughes W., Bethany Hospital, 66102 (621-6600)
15 M 1902 39 CD
Deitz, Michael R., 155 S. 18th, 66102 (342-2222)
22 M 4101 58 OPH
Delp, Mahlon H., K.U. Med. Center, 66103 (831-6976)
03 M 1902 34 IM
Denner, J. Lee, K.U. Med. Center, 66103 (831-6400)
31 M 3501 60 P
Dick, Arthur R., K.U. Med. Center, 66103 (831-6970)
34 M 2301 65 N
Dickerson, Shelby C., K.U. Med. Center, 66103 (831-5000)
46 M 5101 72 RES (IM)
Diederich, Dennis A., K.U. Med. Center, 66103 (831-6981)
36 M 2834 61 IM
Diehl, Antoni M., K.U. Med. Center, 66103 (831-6311)
24 M 2604 47 PDC
Dudding, Burton A., K.U. Med. Center, 66103 (831-6302)
39 M 3520 64 PD
Dujovne, Carlos A., K.U. Med. Center, 66103 (831-6026)
37 M 13201 61 CP
Dunn, Marvin I., K.U. Med. Center, 66103 (831-6015)
27 M 1902 54 CD
Eaton, Karen S., 2935 W. 43rd, 66103 (362-7276)
52 F Medical Student
Enders, Wray, 810 N. 71st St., 66112 (334-3991)
02 M 1902 36 OO
Fainstat, Theodore, K.U. Med. Center, 66103 (831-6213)
29 M 6701 55 OBG
Fitzpatrick, M. Robert, 1610 Washington, 66102 (321-4800)
20 M 1803 44 FP
Floersch, Hubert M., 155 S. 18th, 66102 (371-2020)
08 M 1902 35 OBG
Forester, N. Preston, 600 Nebraska 66101 (371-1165)
44 M 1902 70 IM
Foret, John D., K.U. Med. Center, 66103 (831-6147)
26 M 1602 53 U
Foster, Frances M., 4th & State, 66101 (621-1088)
41 F 4707 67 RES (FP)
Fox, Howard A., K.U. Med. Center, 66103 (831-6337)
33 M 3501 62 PD
Francisco, Clarence L., 155 S. 18th, 66102 (371-6800)
09 M 1902 34 ORS
Francisco, W. David, 155 S. 18th, 66102 (371-6800)
21 M 1902 44 ORS
Franks, Darrell D., K.U. Med. Center, 66103 (831-6400)
44 M 1902 70 RES (P)
Friesen, Stanley R., K.U. Med. Center, 66103 (831-6108)
18 M 1902 43 GS
Gallehugh, Keith W., 155 S. 18th, 66102 (371-4343)
32 M 1902 57 R
Gilhousen, Frederic M., 1029 N. 32nd, 66102 (621-1066)
40 M 1902 66 ORS
Gilmore, Clarence A., 600 Nebraska, 66101 (321-6670)
31 M 4707 60 OBG
Godfrey, William A., K.U. Med. Center, 66103 (831-6600)
38 M 1902 65 OPH
Goertz, Leo R., 155 S. 18th, 66102 (371-4343)
22 M 1902 52 R
Gollerkeri, Mohan P., K.U. Med. Center, 66103 (831-6031)
30 M 49516 52 HEM
Gonzalez, Giomar, K.U. Med. Center, 66103 (831-6800)
36 M 26404 61 R

Grantham, Jared J., K.U. Med. Center, 66103
(831-6983)
36 M 1902 62 IM

Greenberger, Norton J., K.U. Med. Center, 66103
(831-6001)
33 M 3806 59 GE

Gripkey, Clarence A., 1501 Tauromee, 66102
(371-0117)
05 M 1902 30 GS

Gruendel, Richard A., 1029 N. 32nd, 66102
(621-1066)
29 M 1902 55 ORS

Gruendel, Virginia T., 6926 Garfield, 66102
(299-2787)
30 F 1902 55 FP

Gumucio, Mario L., 860 New Brotherhood Bldg., 66101
(321-4046)
30 M 64901 63 IM

Habersang, Rolf W. O., K.U. Med. Center, 66103
(831-6324)
44 M 86901 70 PD

Hannah, Hamner, III, K.U. Med. Center, 66103
(831-6114)
39 M 5101 60 TS

Hancock, Alan C., 9201 Parallel, 66112
(299-0130)
35 M 1902 65 FP

Hardin, Creighton A., K.U. Med. Center, 66103
(831-6106)
18 M 5605 43 GS

Hartman, Gerald V., K.U. Med. Center, 66103
(831-6815)
20 M 1902 45 R

Haswell, Glenn L., K.U. Med. Center, 66103
(831-6200)
41 M 1001 67 OBG

Hathaway, Peter, K.U. Med. Center, 66103
(831-6043)
31 M 3503 60 IM

Hensleigh, Paul A., K.U. Med. Center, 66103
(831-6200)
39 M 1902 65 OBG

Hermreck, Arlo S., K.U. Med. Center, 66103
(831-7232)
38 M 1902 65 GS

Hiebert, Peter E., 155 S. 18th, 66102
(371-4343)
03 M 1902 34 R

Hinthorn, Daniel R., K.U. Med. Center, 66103
(831-6035)
41 M 1902 67 IM

Hodges, Glenn R., K.U. Med. Center, 66103
(831-6035)
41 M 1602 67 ID

Holbert, Lelond L., 1854 Minn., 66102
(321-3838)
15 M 1003 46 FP

Holdcraft, Jacquelyne, 480 New Brotherhood Bldg., 66101
(321-1161)
36 F 2105 63 ENT

Holleman, James F., Jr., D.O., 667 S. 55th, 66106
(287-1414)
38 M 2840 70 OST

Hollowell, Joseph G., Jr., K.U. Med. Center, 66103
(831-7175)
32 M 4501 59 PD

Holmes, Frederick F., K.U. Med. Center, 66103
(831-6487)
32 M 5404 57 IM

Holmes, Grace E., K.U. Med. Center, 66103
(831-6325)
32 F 5404 57 PD

Holter, Harold V., 494 New Brotherhood Bldg., 66101
(371-7370)
02 M 1606 28 GYN

Hoogstraten, Barth, K.U. Med. Center, 66103
(831-6029)
24 M 66001 55 IM

Hudson, Robert P., K.U. Med. Center, 66103
(831-7040)
26 M 1902 52 IM

Huerter, Quentin C., 771 New Brotherhood Bldg., 66101
(321-5370)
31 M 1902 59 OPH

Huff, John D., 1428 S. 32nd, 66106
(384-1630)
21 M 1902 52 FP

Humphrey, Loren J., K.U. Med. Center, 66103
(831-6101)
31 M 1611 56 GS

Hurwitz, Aryeh, K.U. Med. Center, 66103
(831-6026)
36 M 2802 61 IM

Ibarra, Richard C., 754 Pacific, 66101
(342-3969)
26 M 64902 57 FP

Ingram, John E., 1428 S. 32nd, 66106
(384-1630)
24 M 3006 56 FP

Innes, Robert C., 1818 Tauromee, 66102
(621-5335)
25 M 2802 49 R

Jacobs, David S., 1818 Tauromee, 66102
(621-5335)
31 M 2501 56 PATH

Jacobs, Rae R., K.U. Med. Center, 66103
(831-6504)
36 M 3506 62 ORS

Jahanian, Daryoush, 155 S. 18th, 66102
(371-2020)
40 M 51701 64 OBG

Jayaram, Marandapalli R., 6420 Parallel, 66102
(299-8000)
42 M 49509 65 PD

Jewell, William R., K.U. Med. Center, 66103
(831-6112)
35 M 1611 61 GS

Jones, Herman H., 600 Nebraska, 66101
(342-4010)
25 M 4707 54 GS

Kalavsky, Steven M., K.U. Med. Center, 66103 (831-6326)
43 M 801 69 PD

Kalivas, James T., K.U. Med. Center, 66103 (831-6028)
38 M 502 63 D

Kauffman, Ralph E., K.U. Med. Center, 66103 (831-6324)
39 M 1902 65 PD

Kelly, Charles R., K.U. Med. Center, 66103 (831-6795)
38 M 1902 64 PM

Kennedy, James A., K.U. Med. Center, 66103 (831-6000)
35 M 2834 61 IM

Kepes, John J., K.U. Med. Center, 66103 (831-7076)
28 M 47301 52 PATH

Kerby, Gerald R., K.U. Med. Center, 66103 (831-6044)
32 M 1902 58 PUD

Ketchum, Lynn D., K.U. Med. Center, 66103 (831-6143)
36 M 2101 60 PS

Khurana, Satish K., 4th & State, 66101 (321-3055)
41 M 49536 65 PD

Kim, Jong M., K.U. Med. Center, 66103 (831-6670)
40 M 58302 64 ANES

King, Charles R., K.U. Med. Center, 66103 (831-6200)
47 M 1902 71 RES (OBG)

Kirchner, Fernando R., K.U. Med. Center, 66103 (831-6700)
30 M 64901 55 OTO

Kishore, Pulla R. S., K.U. Med. Center, 66103 (831-6800)
37 F 49521 62 R

Klotz, Arthur P., K.U. Med. Center, 66103 (831-6019)
13 M 1602 38 GE

Krantz, Kermit E., K.U. Med. Center, 66103 (831-6201)
23 M 1606 48 OBG

Krueger, Alan L., K.U. Med. Center, 66103 (831-6464)
41 M 1902 67 P

Kwee, Sioe T., 759 Vermont, 66101 (621-0700)
36 F 1720 63 PATH

Kyner, Joseph L., K.U. Med. Center, 66103 (831-5554)
34 M 1902 60 IM

Laing, Robert R., 155 S. 18th, 66102 (371-6800)
37 M 1643 61 GE

Lansky, Lester L., K.U. Med. Center, 66103 (831-6300)
33 M 2604 65 PDN

Lansky, Shirley B., K.U. Med. Center, 66103 (831-6400)
35 F 2604 60 PD

Laybourne, Paul C., Jr., Lake Quivira, 66106 (831-6475)
19 M 3509 44 CHP

Leake, Hunter C., III, K.U. Med. Center, 66103 (831-6300)
37 M 2105 63 PD

Lee, James G., Jr., 155 S. 18th, 66102 (371-2330)
18 M 1902 44 OBG

Lee, Kyo Rak, K.U. Med. Center, 66103 (831-6800)
33 M 58302 59 R

Lemoine, Albert N., Jr., K.U. Med. Center, 66103 (831-6600)
18 M 2802 43 OPH

Lindsley, Carol B., K.U. Med. Center, 66103 (831-5907)
41 F 5404 68 PD

Lindsley, Herbert B., K.U. Med. Center, 66103 (831-6008)
40 M 1902 66 IM

Linshaw, Michael A., K.U. Med. Center, 66103 (831-6300)
40 M 4109 66 PD

Liu, Chien, K.U. Med. Center, 66103 (831-6035)
21 M 24217 47 PD

Lloyd, Harvey L., 3200 Strong, 66106 (831-1111)
08 M 1803 36 FP

Lowe, Bruce A., 8738 Switzer, 66214 (831-6000)
51 M Medical Student

Lukert, Barbara P., K.U. Med. Center, 66103 (831-5554)
34 F 1902 60 IM

Mani, M. Mani, K.U. Med. Center, 66103 (831-6136)
37 M 49527 65 GS

Manley, Joseph W., 3700 North 27th, 66104 (371-3503)
42 M 1902 69 OBG

Mantz, Frank A., Jr., K.U. Med. Center, 66103 (831-7099)
12 M 4101 38 PATH

Martin, Norman L., K.U. Med. Center, 66103 (831-6800)
36 M 1902 63 R

Martin, William A., D.O., 1010 Huron Bldg., 66101 (342-2750)
30 M 2840 68 FP

Masters, Frank W., K.U. Med. Center, 66103 (831-6142)
20 M 3545 45 PS

Mathewson, Hugh S., K.U. Med. Center, 66103 (831-6675)
21 M 1902 44 ANES

Mattioli, Leone, K.U. Med. Center, 66103
(831-6311)
32 M 56115 56 PDC

McCarthy, Robert P., 155 S. 18th, 66102
(342-7233)
25 M 2834 53 U

McSwain, Norman E., Jr., K.U. Med. Center, 66103
(831-6111)
37 M 102 63 GS

Mebust, Winston K., K.U. Med. Center, 66103
(831-6148)
33 M 5404 58 U

Medearis, Donald N., 2200 Grandview Blvd., 66102
(371-6787)
01 M 2401 27 OO

Mee, Adrian W., K.U. Med. Center, 66103
(831-6670)
19 M 1902 54 ANES

Meek, Joseph C., Jr., K.U. Med. Center, 66103
(831-6023)
31 M 1902 57 IM

Mesina, Rolando R., 1102 Minnesota Avenue, 66102
(381-3829)
37 M 74801 61 GS

Miller, Herbert C., K.U. Med. Center, 66103
(831-6302)
07 M 801 34 PD

Moeller, Donald B., 155 S. 18th, 66102
(371-6800)
34 M 1902 60 GE

Moffat, Robert E., K.U. Med. Center, 66103
(831-6800)
42 M 1902 68 R

Moore, Wayne V., K.U. Med. Center, 66103
(831-6336)
42 M 2604 70 PD

Morffi, Raul R., 5411 Leavenworth Rd., 66104
(287-8300)
25 M 27501 51 IM

Morgan, Candice A., K.U. Med. Center, 66103
(831-5000)
46 F Med. Student

Morrison, Richard A., K.U. Med. Center, 66103
(831-6815)
34 M 1902 60 R

Mullen, Clifford J., Sr., 1409 Minnesota, 66102
(342-8392)
98 M 3006 23 OPH

Mullen, Clifford J., Jr., 1409 Minnesota, 66102
(342-8392)
38 M 1902 64 OPH

Nason, Herbert M., 1225 N. 78th, 66112
(299-1616)
30 M 1902 56 FP

Neighbor, Ernest G., 1420 S. 42nd, 66106
(831-1100)
06 M 1902 33 FP

Neighbor, Gaylord P., 1420 S. 42nd, 66106
(831-1100)
13 M 1902 41 FP

Nohe, Philip C., 266 New Brotherhood Bldg., 66101
(321-4422)
17 M 1902 42 ORS

Norris, Charley W., K.U. Med. Center, 66103
(831-6700)
33 M 1902 64 OTO

Nothnagel, Arnold F., 1610 Washington, 66102
(342-1100)
15 M 1902 39 GS

O'Connell, Paul J., 4178 Cambridge, 66103
(722-6255)
87 M 2820 10 OO

O'Dell, Michael L., Bldg. 11, 1100 County Line Rd., 66103
(362-4945)
51 M Med. Student

Oldfield, Ray W., 6111 Leavenworth Road, 66104
(334-6200)
45 M 1902 72 FP

Pardo, Lillian G., K.U. Med. Center, 66103
(831-6373)
39 F 74807 62 PDN

Pardo, Manuel P., K.U. Med. Center, 66103
(831-6464)
35 M 74801 62 P

Park, Chan H., K.U. Med. Center, 66103
(831-6029)
36 M 58302 62 IM

Parmley, Ray T., K.U. Med. Center, 66103
(831-6671)
19 M 2101 44 ANES

Parra, Miguel D., 6111 Leavenworth Rd., 66104
(299-2088)
37 M 84710 64 FP

Pazell, John A., 155 South 18th St., 66102
(371-6800)
40 M 2501 66 ORS

Penka, Wayne E., K.U. Med. Center, 66103
(831-7091)
46 M 3006 72 RES (PATH)

Perry, Lawrence L., Jr., 4125 Rainbow Blvd., 66103
(831-6763)
34 M 1902 59 FP

Pfeffer-Hurwitz, Judith, 36th & Eaton, 66103
(831-9500)
34 F 3806 59 CHP

Peters, Glenn R., 155 S. 18th, 66102
(371-6800)
12 M 1902 37 GS

Pierce, George E., K.U. Med. Center, 66103
(831-6115)
33 M 2307 60 TS

Pilchard, William A., K.U. Med. Center, 66103
(831-6600)
39 M 1602 65 OPH

Pingleton, William W., K.U. Med. Center, 66103
(831-6044)
42 M 3901 67 PUD

Pischke, Frank J., 480 New Brotherhood Bldg., 66101
(321-1161)
36 M 1902 62 OTO

Porter, David M., 600 Nebr., 66101
(371-5240)
39 M 4707 64 PD

Potter, Robert L., 51 N. 12th, 66102
(621-6361)
38 M 1902 64 IM

Powers, G. Robert, 9201 Parallel, 66112
(299-0130)
33 M 1902 65 FP

Preston, David F., K.U. Med. Center, 66103
(831-6810)
33 M 3841 59 NM

Pretz, James B., 1610 Washington, 66102
(342-2442)
24 M 1902 47 FP

Proud, G. O'Neil, K.U. Med. Center, 66103
(831-6700)
13 M 2802 39 OTO

Pugh, David M., K.U. Med. Center, 66103
(831-6015)
29 M 801 58 CD

Rau, Jerold M., K.U. Med. Center, 66103
(831-6028)
39 M 1902 65 D

Reckling, Frederick W., K.U. Med. Center, 66103
(831-6129)
34 M 3545 59 ORS

Redford, John W. B., K.U. Med. Center, 66103
(831-6791)
28 M 6501 53 PM

Reeve, Arnold M., 619 Ann Avenue 66107
(321-4803)
18 M 2507 50 PH

Regier, Henry L., 2000 Washington Blvd., 66102
(371-1190)
81 M 1902 07 GS

Reis, Robert L., K.U. Med. Center, 66103
(831-6113)
33 M 1001 58 CS

Rettenmaier, Albert J., 251 N. 15th St., 66102
(371-2959)
96 M 3006 26 OO

Rhodes, James B., K.U. Med. Center, 66103
(831-6019)
28 M 1902 58 GE

Rice, Fred A., Jr., 1029 N. 32nd, 66102
(621-1066)
36 M 4802 63 ORS

Rick, Gregory G. P., Jr., 155 S. 18th, 66102
(371-6800)
40 M 1902 66 GE

Riley, Ray B., 2020 Orville Ave., 66102
(281-1013)
06 M 1902 36 FP

Rising, Jesse D., K.U. Med. Center, 66103
(831-7130)
14 M 1902 38 ADM

Roberts, Fred F., K.U. Med. Center, 66103
(831-6834)
32 M 3806 57 R

Robinson, David W., K.U. Med. Center, 66103
(831-6136)
14 M 4101 38 PS

Robinson, Ralph G., K.U. Med. Center, 66103
(831-6810)
37 M 1902 62 R

Robison, James T., K.U. Med. Center, 66103
(831-6600)
21 M 4812 45 OPH

Romig, Donald A., K.U. Med. Center, 66103
(831-6035)
36 M 4101 62 IM

Rook, Lee E., 4116 Strong, 66106
(831-2834)
09 M 1902 38 FP

Rosenfeld, Warren N., K.U. Med. Center, 66103
(831-6302)
43 M 3519 69 PD

Roth, Alan E., 51 N. 12th St., 66102
(621-6600)
35 M 1902 62 PATH

Rubin, Ben, Jr., 132 South 17th, 66102
(371-2561)
37 M 3005 61 PD

Ruth, William E., K.U. Med. Center, 66103
(831-6044)
26 M 1902 53 IM

Ryan, Michael J., 764 New Brotherhood Bldg., 66101
(342-7070)
14 M 2834 37 OTO

Santiago, Eleanor M., K.U. Med. Center, 66103
(831-6044)
38 F 74801 61 IM

Schaffer, Richard A., Bethany Hosp., 66102
(384-1630)
42 M 1902 72 FP

Schaum, Stephen P., 600 Nebraska, 66101
(371-5240)
44 M 1902 70 PD

Schimke, R. Neil, K.U. Med. Center, 66103
(831-6043)
35 M 1902 62 IM

Schloerb, Paul R., K.U. Med. Center, 66103
(831-6110)
19 M 3545 44 GS

Schotland, Edward S., 1300 N. 78th, 66112
(334-5250)
36 M 86901 66 D

Schrepfer, Rosemary, K.U. Med. Center, 66103
(831-6200)
22 F 1902 47 OBG

Sereres, Edgar P., 662 New Brotherhood Bldg., 66101
(321-2501)
15 M 1902 39 A

Sherman, Robert P., 9201 Parallel Ave., 66109
(334-0040)
34 M 1902 63 PUD

Sibala, Justo L., K.U. Med. Center, 66103
(831-6831)
20 M 74802 49 R

Sifers, Earl C., 155 S. 18th, 66102
(371-2900)
24 M 1902 47 GS

Silvers, Alvin, 1702 Southwest Blvd., 66103
(236-9691)
18 M 1902 45 FP

Snow, Arthur D., Jr., K.U. Med. Center, 66103
(383-1754)
45 M Medical Student

Sosnow, William, K.U. Med. Center, 66103
(831-6516)
35 M 3509 65 IM

Soucek, Charles D., 2807 Ohio, 66102
(371-4343)
31 M 3005 56 R

Spaulding, John S., K.U. Med. Center, 66103
(831-5900)
29 M 1602 59 PD

Speer, Leland, 1022 Hoel Parkway, 66102
(321-1040)
12 M 1902 36 PD

Stechschulte, Daniel J., K.U. Med. Center, 66103
(831-6008)
36 M 2834 62 IM

Steele, Clarence H., 480 New Brotherhood Bldg., 66101
(321-1161)
14 M 1902 40 OTO

Steinzeig, Sherman M., 155 S. 18th, 66102
(621-1151)
25 M 1902 52 CD

Stephens, Ronald L., K.U. Med. Center, 66103
(831-6029)
39 M 1902 65 IM

Stevenson, Charles E., K.U. Med. Center, 66103
(831-6670)
19 M 1902 44 ANES

Stitt, Ronald W., 155 S. 18th, 66102
(342-7233)
21 M 1902 45 U

Stotts, Stephen S., K.U. Med. Center, 66103
(831-6670)
42 M 1902 68 ANES

Stout, Carl N., Jr., K.U. Med. Center, 66103
(831-6600)
44 M 2803 70 RES(OPH)

Streib, Erich W., K.U. Med. Center, 66103
(831-6705)
40 M 40919 67 N

Strick, Frank J., 1003 Central, 66102
(371-6841)
17 M 1902 48 FP

Stubblefield, Charles T., 155 S. 18th, 66102
(371-2330)
32 M 1902 58 OBG

Taylor, Thomas L., 155 S. 18th, 66102
(371-2900)
40 M 1902 66 RES (GS)

Templeton, Arch W., K.U. Med. Center, 66103
(831-6805)
32 M 3005 57 R

Therou, Leona F., K.U. Med. Center, 66103
(831-6302)
41 F 6701 67 PD

Thomas, Thomas V., 155 S. 18th, 66102
(321-0145)
37 M 49549 61 TS

Thompson, Dannie M., 600 Nebraska, 66101
(321-6670)
35 M 4707 64 OBG

Toalson, William B., 155 S. 18th, 66102
(371-3515)
37 M 1902 63 IM

Todd, Curtis T., K.U. Med. Center, 66103
(831-6200)
37 M 4102 64 OBG

Tretbar, Lawrence L., 155 S. 18th Street, 66102
(371-7650)
33 M 1902 60 GS

Trueworthy, Robert C., K.U. Med. Center, 66103
(831-6340)
40 M 2802 66 PD

Tucker, Sheridan G., 5740 Dearborn, 66202
(262-2906)
50 M Med. Student

Valk, William L., K.U. Med. Center, 66103
(831-6146)
09 M 2501 37 U

Vats, S. Tribhawan, K.U. Med. Center, 66103
(831-6340)
40 M 49529 63 PD

Villanueva, Cesar L., K.U. Med. Center, 66103
(831-6218)
39 M 74802 65 OBG

Waddell, Bill D., 155 S. 18th, 66102
(321-0386)
31 M 3901 56 IM

Walker, Jack D., K.U. Med. Center, 66103
(831-6510)
22 M 1902 53 FP

Walker, Maurice A., 1417 S. 37th St., 66106
(831-1433)
04 M 1601 28 GS

Walls, William J., K.U. Med. Center, 66103
(831-6800)
39 M 2834 66 R

Waxman, David, K.U. Med. Center, 66103
(831-5207)
18 M 3515 50 IM

Wennen, William W., K.U. Med. Center, 66103
(831-5000)
39 M 2012 66 RES (PS)

Werth, Claude J., 9201 Parallel Pkwy., 66112
(334-0040)
37 M 1902 64 P

West, C. Omer, 414 Huron Bldg., 66101
(371-3572)
92 M 1902 23 D

White, James R., 9201 Parallel, 66112
(299-0130)
37 M 3901 64 FP

Wilson, Sloan J., K.U. Med. Center, 66103
(831-6004)
10 M 1902 36 IM
Winter, Calvert J., 132 S. 17th, 66102
(371-2561)
22 M 1902 47 PD
Wolf, Karl T., 621 Northrup Ave., 66101
(333-4575)
14 M 1902 48 OO
Wolkoff, A. Stark, K.U. Med. Center, 66103
(831-6201)
21 M 4109 50 OBG
Wong, Bert Y., K.U. Med. Center, 66103
(831-6015)
40 M 801 65 CD
Wright, Robert W., 669 New Brotherhood Bldg., 66101
(371-5344)
24 M 1902 48 GS
Youngstrom, Karl A., 6 Arapaho Lane, Lake Quivira, 66106
(631-8536)
08 M 3607 44 OO
Yulich, John O., 1428 S. 32nd, 66106
(384-1630)
33 M 1902 59 FP
Zakheim, Richard M., K.U. Med. Center, 66103
(831-6316)
37 M 3546 62 PDC
Ziegler, Dewey K., K.U. Med. Center, 66103
(831-6970)
20 M 2401 45 N
Zinn, Thomas W., K.U. Med. Center, 66103
(371-4343)
41 M 1902 67 R

KANSAS CITY, MISSOURI—816

Barry, John W., 4620 J. C. Nichols Pkwy., 64112
(753-4011)
22 M 1902 46 R
Boudet, Robert A., V.A. Hosp., 64128
(861-4700)
36 M 1103 62 GS
Calkins, W. Graham, V.A. Hospital, 64128
(861-4700)
26 M 2501 50 GE
Coulter, Thomas B., 4620 J. C. Nichols Pkwy., 64112
(931-0833)
38 M 1205 64 OPH
Cross, Donald E., 4801 Linwood Blvd., 64128
(861-4700)
38 M 2803 65 IM
Davis, James W., Jr., 4801 Linwood Blvd., 64128
(861-4700)
33 M 4705 57 IM
Garcia, Francisco M., 2316 E. Meyer, 64132
(276-4000)
32 M 27501 60 FP
Godfrey, Robert G., V.A. Hosp., 64128
(861-4700)
27 M 1902 58 RHU
Hartman, Charles R., V.A. Hosp., 64128
(861-4700)
37 M 1902 66 IM
Huffman, David H., V.A. Hosp., 64128
(861-4700)
41 M 1902 67 IM
Isenberger, Robert M., 645 W. 61st, 64113
(444-1768)
98 M 3806 25 OO
Johns, Leo E., Jr., V.A. Hospital, 64128
(861-4700)
22 M 2101 45 PUD
Jones, Francis, J., D.O., P.O. Box 9051, 64168
(741-2901)
34 M 2840 60 FP
Lewis, H. Daniel, Jr., 4801 Linwood Blvd., 64128
(861-4700)
32 M 5101 58 CD
Lotito, Carlos A., 701 E. 63rd, 64110
(361-7731)
29 M 13201 56 IM
Powell, Kenneth A., 3520 Broadway, 64111
(753-7000)
25 M 1902 53 IM
Radom, Sanford B., 4620 J. C. Nichols Pkwy., 64112
(753-4011)
40 M 1642 66 R
Richert, Robert C., 504 W. 96th, 64114
(722-3100)
23 M 1902 46 PATH
Whitaker, James H., 7431 Mercier, 64114
(363-7915)
45 M 2803 71 RES(ORS)

KINGMAN—316
(Pratt-Kingman Society)

Boyer, Robert E., 349 N. Main, 67068
(532-3171)
36 M 1902 62 FP

KINSLEY—316
(Edwards County Society)

Atwood, M. Dale, 616 Niles, 67547
(659-2114)
19 M 1902 51 FP
McKim, W. Lynn, 109 W. 8th, 67547
(659-2114)
33 M 1902 59 FP
Schnoebelen, René E., 807 E. 4th, 67547
(659-2141)
16 M 3901 41 GP

KIOWA—316
(Tri-County Society)

Christensen, Marion D., 802 Drumm, 67070
(825-4121)
25 M 3901 52 FP
Patzkowsky, Lawrence W., 802 Drumm, 67070
(825-4121)
23 M 3901 50 FP

LA CROSSE—913
(Central Kansas Society)

Baker, Joseph H., 704 Main, 67548
(222-3418)
89 M 2833 15 FP
Serrano, Joaquin, Medical Clinic, 67548
(222-2564)
29 M 27501 56 FP

LANSING—913
(Leavenworth County Society)

Rouse, Paul H., Med. Dir., State Prison, 66043
(727-3235)
35 M 1902 63 ADM
Snow, Donald L., Holiday Plaza, 66043
(727-3204)
21 M 64904 54 OBG

LARNED—316
(Pawnee County Society)

Blount, Justin A., 621 W. 5th, 67550
(285-2843)
94 M 1902 21 OO
Brenner, William R., 804 Carroll, 67550
(285-3133)
15 M 3006 39 FP
Cram, Ole R., Jr., 722 Mann, 67550
(285-2141)
18 M 1902 43 FP
Davis, David H., 815 W. 6th, 67550
(285-2131)
04 M 1902 30 P
Ewing, Thomas D., 804 Carroll, 67550
(285-3133)
22 M 1902 46 FP
Patterson, Alice W., Box 7, 67550
(285-3636)
13 F 1902 38 OO
Patterson, Harold L., Box 7, 67550
(285-3636)
13 M 1902 38 OPH
Ruiz, Carlos M., Larned State Hosp., 67550
(285-2131)
25 M 27501 52 P
Shepard, LeRoy W., 603 W. 5th, 67550
(285-2023)
04 M 3006 30 OO
Smith, John D., 804 Carrol, 67550
(285-3133)
22 M 3901 51 GP

LAWRENCE—913
(Douglas County Society)

Anderson, Winstan L., 3603 W. 10th, 66044
(843-4455)
09 M 1902 34 GS
Auchard, Virgil M., 2126 Louisiana, 66044
(843-2433)
89 M 1902 23 OO
Bailey, William A., 404 Maine, 66044
(843-9125)
40 M 1902 66 ORS
Belot, Monti L., Jr., Lawrence Natl. Bk. Bldg., 66044
(843-3640)
13 M 1902 40 FP
Blair, Richard, 404 Maine, 66044
(842-3635)
34 M 1902 60 IM
Boyden, Mary S., 4th & Maine, 66044
(842-3778)
14 F 2604 39 PDA
Branson, Vernon L., 4th & Maine, 66044
(842-4477)
17 M 1902 42 PD
Buck, Henry W., Jr., 4th & Maine, 66044
(843-0677)
34 M 1902 60 OBG
Button, Jesse H., 930 Iowa, 66044
(841-3535)
35 M 1902 63 P
Clark, Margaret G., Hillcrest Med. Center, 66044
(843-3888)
10 F 1902 44 FP
Clark, Ray A., 2103 Kingston Dr., 66044
(843-1005)
07 M 1902 39 FP
Clinton, Dale L., 15 E. 7th, 66044
(841-5716)
21 M 1902 54 PH
Culver, Warren T., 2500 W. 6th, 66044
(842-4178)
20 M 3508 46 OPH
Dunlap, Richard L., 4th & Maine, 66044
(842-4344)
12 M 3005 37 EENT
Gilles, Helen M., 4th & Maine, 66044
(842-4477)
22 F 1902 45 PD
Godwin, Phillip A., 4th & Maine, 66044
(842-1070)
28 M 1902 55 ANES
Hatton, Donald W., 404 Maine, 66044
(842-3635)
42 M 1902 68 IM
Hermes, Richard L., 4th & Maine, 66044
(843-0677)
15 M 4112 39 OBG
Hiebert, David L., 404 Maine, 66044
(841-3211)
36 M 1902 61 R
Hird, Wayne E., 329 Missouri, 66044
(842-4300)
26 M 1902 50 TS
Hughes, Robert W., 4th & Maine, 66044
(843-1374)
27 M 1902 54 FP
Ingham, H. Laird, 404 Maine, 66044
(842-3635)
45 M 3901 70 IM

Jones, H. Penfield, 4th & Maine, 66044
(842-0211)
06 M 2401 31 GS
Joseph, Howard F., 944 Kentucky, 66044
(843-3981)
26 M 1902 51 U
Kimbrough, Victoria F., 935 Iowa, 66044
(843-8425)
10 F 4706 37 OPH
Learned, George R., 401 Arkansas, 66044
(843-5502)
22 M 1902 55 GS
Lessenden, Glenn A., 4th & Maine, 66044
(843-6233)
24 M 1902 48 FP
Madsen, Glenn L., 404 Maine, 66044
(841-3211)
38 M 3005 65 R
Manahan, G. Eugene, 4th & Maine, 66044
(842-0211)
19 M 1902 44 GS
Mitchell, Alexander C., 4th & Maine, 66044
(842-5070)
18 M 1902 50 FP
Nelson, Richard O., 201 W. 8th, 66044
(843-0921)
11 M 1001 41 FP
Olson, Carl E., 107 W. 7th, 66044
(842-9981)
17 M 1611 46 FP
Orchard, Richard A., 932 Massachusetts, 66044
(841-2280)
41 M 2802 68 OPH
Owen, Garry D., 4th & Maine, 66044
(843-0677)
37 M 1902 63 OBG
Price, Laurance W., Jr., 404 Maine, 66044
(843-3680)
33 M 1902 59 PATH
Reed, Ralph R., 404 Maine, 66044
(842-3635)
27 M 1902 53 IM
Reese, John L., 4th & Maine, 66044
(842-6644)
35 M 1902 61 GS
Roberts, Richard S., 942 Kentucky, 66044
(843-6137)
19 M 2802 44 GS
Robison, Corbin E., 901 Kentucky, 66044
(843-3033)
14 M 1902 39 GS
Rothrock, Irvin A., 930 Iowa, 66044
(842-8639)
26 M 401 52 CHP
Sanders, J. Alan, 2309 Princeton Blvd., 66044
(843-3680)
29 M 1902 60 PATH
Schroeder, Sydney O., Watkins Memorial Hosp., 66044
(864-4045)
18 M 1902 44 P
Schwegler, Raymond A., 1504 University Dr., 66044
(843-4455)
07 M 2604 31 OBG
Walters, Byron W., 1030 Avalon Rd., 66044
(843-6751)
13 M 1902 39 FP
Well, Michael A., 944 Kentucky, 66044
(843-3981)
41 M 1606 67 U
Wertzberger, John J., 404 Maine, 66044
(843-9125)
36 M 1902 63 ORS
Wilcox, Howard L., 4th & Maine, 66044
(843-0677)
18 M 3520 44 OBG
Wollmann, Martin, Watkins Memorial Hosp., 66044
(843-9530)
26 M 1902 70 IM
Wright, M. Erik, 2728 Stratford Rd., 66044
(843-3360)
15 M 502 50 P

LEAVENWORTH—913
(Leavenworth County Society)

Barry, David R., 500 Eisenhower Rd., 66048
(651-6000)
42 M 1902 68 FP
Baser, Ali N., 711 Thornton, 66048
(682-7448)
28 M 90201 53 P
Bennett, Charles A., 520 6th Ave., 66048
(682-4373)
96 M 1902 25 FP
Cenac, Mark T., 500 Eisenhower Rd., 66048
(651-6000)
27 M 401 49 GS
Combs, G. Ralph, 211 Arch St., 66048
(682-0478)
79 M 4101 02 OO
Duysak, Sami, 520 6th Ave., 66048
(682-6661)
22 M 90201 47 IM
Gerber, Harry A., 605 N. 6th Ave., 66048
(682-3893)
96 M 5606 30 FP
Graham, J. Malcolm, 500 Eisenhower Rd., 66048
(651-6000)
28 M 3840 54 PD
Graham, Kenneth L., 500 Eisenhower Rd., 66048
(651-6000)
21 M 3840 45 GS
Graham, Thomas W., 500 Eisenhower Rd., 66048
(651-6000)
26 M 3840 50 IM
Grisolia, Andres, 424 Walnut, 66048
(682-5400)
27 M 84708 50 ORS
Hammeke, John C., 520 6th Ave., 66048
(682-5201)
27 M 401 61 OPH

Johnson, Leonard W., 500 Eisenhower Rd., 66048
(651-6000)
38 M 1902 64 IM
Johnson, Paul D., 520 6th Ave., 66048
(682-6661)
36 M 1902 61 FP
McKee, Richard S., 422 Walnut, 66048
(682-1023)
05 M 1902 35 ANES
Merritt, W. Henry, 520 6th Ave., 66048
(682-6661)
14 M 702 39 GS
Nassour, Paul A., 500 Eisenhower Rd., 66048
(651-6000)
42 M 64914 71 FP
Parker, Robert W., 500 Eisenhower Rd., 66048
(651-6000)
45 M 1902 71 FP
Pratt, William L., 506 Shawnee, 66048
(682-6566)
05 M 3006 30 GS
Rabe, Melvin A., 520 6th Ave., 66048
(682-6661)
14 M 1902 37 GS
Strutz, William C., 68 Westwood Dr., 66048
(682-8868)
08 M 5606 43 R
Voorhees, Carroll D., 520 6th Ave., 66048
(642-6661)
12 M 1902 39 FP
Voorhees, Gordon S., 520 6th Ave., 66048
(682-6661)
12 M 1902 39 IM

LEAWOOD (*see* Shawnee Mission)

LENEXA (*see* Shawnee Mission)

LENORA—913
(Northwest Kansas Society)

Steichen, Edward F., 67645
(567-4310)
05 M 1601 31 FP

LIBERAL—316
(Seward County Society)

Allen, Ray E., 2 Plaza Drive, 67901
(624-5691)
37 M 1902 64 IM
Campion, Woodrow M., 121 W. 3rd, 67901
(624-2594)
13 M 1902 39 IM
Grimes, I. Ross, 222 W. 15th, 67901
(624-1676)
27 M 3901 54 TS
Harris, Norvan D., 222 W. 15th, 67901
(624-3811)
20 M 1902 44 OBG
Hilbig, Albert L., 715 N. Sherman, 67901
(624-5397)
01 M 3901 30 OO
Holcomb, William M., 15th E. 11th, 67901
(624-2252)
31 M 3901 56 GS
Koons, Jess W., 1210 N. Washington, 67901
(624-3841)
27 M 1902 57 OPH
Prochazka, Otto F., Box 1067, 67901
(624-1651)
12 M 1902 38 R
Rathbun, Edwin D., 610 W. 11th, 67901
(624-1841)
36 M 1902 62 FP
Reese, Jack D., 15th E. 11th, 67901
(624-6226)
32 M 1902 57 FP
Seago, Charlotte L., 1114 N. Washington, 67901
(624-1625)
35 F 1720 60 PD
Wade, Theodore E., 1031 N. Kansas, 67901
(624-5695)
04 M 512 30 GS

LINCOLN—913
(Central Kansas Society)

Madden, William J., P.O. Box 367, 67455
(524-4053)
24 M 1902 51 FP
Songer, Herbert L., 67455
(524-4053)
12 M 1902 38 FP

LINDSBORG—913
(McPherson County Society)

Fredrickson, Duane E., 121 W. Lincoln, 67456
(227-3371)
39 M 1902 67 FP
Fuller, Deryl D., 121 W. Lincoln, 67456
(227-3371)
25 M 1902 50 FP
Murfitt, Malcolm C., 231 N. Main, 67456
(227-5761)
13 M 801 41 IM

LINWOOD—913
(Wyandotte County Society)

Funk, Edward D., R.R. 1, Box 144, 66052
(723-3329)
04 M 1902 41 ANES

LITTLE RIVER—316
(Rice County Society)

Schmidt, Alfred F., 67457
(897-6221)
15 M 1902 41 FP

LOUISBURG—913
(Miami County Society)

Kullman, Frederick M., P.O. Box P, 66053
(837-2600)
45 M 702 71 FP

LYNDON—913
(Franklin County Society)

Stout, Niles M., 66451
(828-4521)
16 M 1902 50 FP

LYONS—316
(Rice County Society)

Grimes, James T., 510 E. Ave. S, 67554
(257-5124)
27 M 1902 53 FP
Siemens, Richard A., 510 E. Ave. S, 67554
(257-5124)
30 M 1902 59 FP
Wolf, Curtis V., 510 E. Ave. S, 67554
(257-5124)
37 M 1902 64 FP

MANHATTAN—913
(Riley County Society)

Ball, Ralph G., 215 S. Delaware, 66502
(537-1956)
03 M 1902 27 OO
Bascom, George S., 1133 College, 66502
(539-6574)
27 M 2401 52 GS
Bestgen, Fred P., 1011 N. Juliette, 66502
(537-7661)
95 M 3006 32 OO
Boese, Kenneth M., 123 S. 5th, 66502
(776-4744)
25 M 1902 56 FP
Brown, Robert M., Kansas State University, 66502
(532-6544)
31 M 1902 63 FP
Burdick, Bruce M., 426 Houston, 66502
(776-9411)
25 M 512 53 P
Crane, C. Herbert, 1133 College, 66502
(537-9030)
22 M 3520 46 PD
Douthit, John D., 1133 College, 66502
(539-1151)
37 M 3005 62 ORS
Durkee, William R., 123 S. 5th, 66502
(776-4744)
23 M 1902 45 IM
Evans, Darrel L., 1860 Claflin Rd., 66502
(539-2691)
04 M 1902 31 FP
Fairchild, John A., 1133 College, 66502
(539-4041)
14 M 3006 41 ANES
Fischer, Rex R., 1133 College, 66502
(539-5322)
34 M 3005 60 OBG
Freeman, Fred A., 1133 College, 66502
(537-8710)
42 M 1902 69 U
Heasty, Robert G., 1133 College, 66502
(539-5322)
11 M 3519 38 OBG
Hostetter, Philip H., 821 Poyntz, 66502
(537-2544)
17 M 1902 42 FP
Hunter, James S., Jr., 1133 College, 66502
(539-5501)
18 M 2301 41 OBG
Jubelt, Hilbert P., 1133 College, 66502
(537-9030)
19 M 1611 43 PD
Kempthorne, Charles R., 519 N. 11th, 66502
(539-5211)
03 M 5605 32 OPH
Klingler, Eugene A., Jr., 1133 College, 66502
(539-5341)
35 M 1902 62 GS
Lafene, Benjamin W., 1844 Anderson Ave., 66502
(539-4014)
01 M 3806 31 OO
Lowe, Stanley W., 1133 College, 66502
(539-3451)
32 M 1902 59 OPH
McKnight, David E., 1133 College, 66502
(539-7641)
32 M 1902 57 R
McNeil, Elbert D., 1133 College, 66502
(537-9030)
22 M 702 48 PD
Marshall, Ronald L., 1133 College, 66502
(539-5322)
42 M 3005 67 OBG
Miller, Abraham H., 1133 College, 66502
(527-2651)
29 M 4101 54 IM
Mowry, Gerald L., 1133 College, 66502
(539-5322)
26 M 1902 53 OBG
Olney, Robert D., 123 S. 5th, 66502
(776-4744)
27 M 3005 51 GS
Peterson, Jack T., 1133 College, 66502
(539-5527)
25 M 1902 50 PATH
Phillips, Stephen B., Kansas State University, 66502
(532-6544)
17 M 1902 45 IM
Reitz, Leland C., 3001 Claflin Rd., 66502
(539-3501)
36 M 1902 63 IM
Reitz, Roger P., 1133 College, 66502
(539-3501)
32 M 1902 59 IM
Schultz, Millard E., Kansas State University, 66502
(532-6544)
12 M 1902 45 FP
Sinclair, Robert E., Kansas State University, 66502
(532-6544)
24 M 3840 52 ADM

Stein, Robert B., 1619 Poyntz, 66502
(539-1851)
29 M 3506 52 P
Stone, G. Rex, 1133 College, 66502
(539-7555)
29 M 1902 54 GS
Tiemann, William H., Kansas State University, 66502
(532-6544)
42 M 3005 67 PM
White, Thaddeus H., 1860 Claflin, 66502
(539-2691)
15 M 1902 42 FP

MANKATO—913
(Republic County Society)

Kimball, Richard R., 102 S. Center, 66956
(378-3511)
45 M 1001 72 FP
Schlotterback, William E., Box 288, 66956
(378-3511)
31 M 1902 61 FP

MARION—316
(Marion County Society)

Ensey, T. Cranford, 504 S. Roosevelt, 66861
(382-2182)
20 M 4804 47 FP
Melton, Ralph R., 118 N. 4th, Box D, 66861
(382-2360)
05 M 1902 33 FP

MARYSVILLE—913
(Northeast Kansas Society)

Argo, Donald A., 808 N. 19th, 66508
(562-2303)
36 M 3005 64 FP
Laws, Lewis R., 808 N. 19th, 66508
(562-2303)
25 M 1902 54 FP

McLOUTH—913
(Jefferson County Society)

Snook, Robert R., 66054
(796-2800)
11 M 1902 42 FP

McPHERSON—316
(McPherson County Society)

Billings, Thomas, 400 W. 4th, 67460
(241-5500)
39 M 1902 67 FP
Brandsted, Ernest C., 400 W. 4th, 67460
(241-1654)
18 M 1606 44 OBG
Collier, William J., 400 W. 4th, 67460
(241-1766)
25 M 3605 49 GS
Dyck, Arthur H., 101½ N. Main, 67460
(241-0357)
03 M 1902 28 FP
Johnson, J. Richard, 400 W. 4th, 67460
(241-4293)
28 M 1902 55 IM
Pierson, Weir, 823 N. Main, 67460
(241-1445)
17 M 1902 44 FP
Price, Vaughan C., 120 N. Ash, 67460
(241-1224)
05 M 4706 29 GS
Sohlberg, Robert, Jr., 116 N. Ash, 67460
(241-2321)
05 M 1606 34 FP

MEADE—316
(Iroquois County Society)

Daugherty, Robert M., 440 E. Naughton, 67864
(873-2806)
09 M 1902 36 OO
Hill, Richard H., 234 E. Carthage, 67864
(873-2113)
18 M 1902 44 FP

MEDICINE LODGE—316
(Tri-County Society)

Ball, Larry D., 116 E. Kansas, 67104
(886-5653)
32 M 1902 58 FP
Hoffer, John G., 604 N. Walnut, 67104
(886-4222)
13 M 1902 44 GS
Stucky, Dean E., 116 E. Kansas, 67104
(886-5653)
33 M 1902 60 FP

MINNEAPOLIS—913
(Saline County Society)

Bray, E. Dean, 311 N. Mill, 67467
(392-2144)
29 M 1902 60 FP
Wedel, Kenneth D., 311 N. Mill, 67467
(392-2144)
32 M 1902 60 FP
Wedel, Kermit G., 311 N. Mill, 67467
(392-2144)
32 M 1902 60 FP

MINNEOLA—316
(Iroquois County Society)

Stephens, Charles G., 222 Main, 67865
(885-4202)
33 M 2803 58 FP

MISSION (*see* Shawnee Mission)

MORAN—316
(Allen County Society)

Nevitt, J. Russell, P.O. Box 430, 66755
(237-4531)
99 M 3510 32 FP

MOUNDRIDGE—316
(McPherson County Society)

Kaufman, Willard E., 115 N. Christian, 67107
(345-6322)
28 M 1902 53 FP

Loganbill, Varden J., 115 N. Christian, 67107
(345-6322)
26 M 1902 54 FP

MULVANE—316
(Sedgwick County Society)

Cobb, Leslie H., 102 E. Main, 67110
(777-1441)
17 M 4804 47 FP

NASHVILLE—316
(Pratt-Kingman Society)

Waylan, Thornton L., 67112
(246-5231)
06 M 1902 35 FP

NEODESHA—316
(Southeast Kansas Society)

Brummett, Richard R., 806 Main, 66757
(325-2622)
34 M 1902 64 FP
Chronister, Bert, 806 Main, 66757
(325-2622)
38 M 1902 64 FP
Moorhead, F. Allen, 703 Main St., 66757
(325-2200)
39 M 1902 65 FP

NESS CITY—913
(Central Kansas Society)

Parker, Dean B., 415 S. Court, 67560
(798-2655)
04 M 1902 29 OO
Wiens, Peter K., 722 E. Locust, 67560
(798-3191)
24 M 1902 55 FP

NEWTON—316
(Harvey County Society)

Allen, Frances Ann, 201 S. Pine, 67114
(283-3600)
15 F 1902 43 IM
Benton, Jay S., 201 S. Pine, 67114
(283-3600)
23 M 4804 49 OBG
Carper, Ivan H., 203 E. Broadway, 67114
(283-2800)
28 M 1902 59 GS
Carper, Owen E., 203 E. Broadway, 67114
(283-2800)
37 M 1902 64 FP
Classen, Milton A., 201 S. Pine, 67114
(283-3600)
32 M 1902 58 ORS
Dyck, George, 1301 Grandview, 67114
(283-2400)
37 M 6201 64 P
Enns, Eugene K., 6 Indian Lane, 67114
(283-0974)
15 M 1902 40 OO
Enns, James H., 900 N. Poplar, 67114
(283-1400)
24 M 1902 47 OPH
Fent, Lee S., 316 Oak, 67114
(283-0505)
14 M 2834 43 GS
Fransen, Herbert, Doctor's Park, 67114
(283-5040)
32 M 6501 60 GS
Fransen, Paul H., 209 S. Pine, 67114
(283-5040)
46 M 6501 71 FP
Glover, Richard M., 203 E. Broadway, 67114
(283-2800)
21 M 1902 53 FP
Griswold, Dale G., 203 E. Broadway, 67114
(283-2800)
27 M 1902 53 IM
Grove, John A., 203 E. Broadway, 67114
(283-2800)
08 M 1606 37 ORS
Grove, John L., 407 W. 16th, 67114
(283-0625)
80 M 1611 06 OO
Grove, William E., 203 E. Broadway, 67114
(283-2800)
14 M 1606 40 GS
Hawkey, Alfred S., 203 E. Broadway, 67114
(283-2800)
03 M 1902 29 OBG
Hill, Phillip K., 201 S. Pine, 67114
(283-3600)
29 M 1803 56 CD
Hwa, Eugene C., P.O. Box 364, 67114
(283-1160)
21 M 24216 47 R
Isaac, Arnold G., 700 W. 9th, 67114
(283-1235)
93 M 1601 22 OO
Isaac, Charles A., 203 E. Broadway, 67114
(283-2800)
25 M 1902 49 U
Klassen, Daniel S., 316 Oak, 67114
(283-1313)
13 M 1902 42 OBG
Kliewer, Vernon L., Prairie View Hospital, 67114
(283-2400)
31 M 1606 57 P
Lorentzen, Donald E., 201 S. Pine, 67114
(283-3600)
34 M 3701 61 IM
Myers, Robert W., 201 S. Pine, 67114
(283-3600)
11 M 1902 43 GS
Nachtigall, Andrew, 201 S. Pine, 67114
(283-3600)
28 M 1902 59 PD
Olson, Erwin T., 201 S. Pine, 67114
(283-3600)
19 M 1902 47 PD
Pedraza, Hernando V., 4 Sycamore St., 67114
(264-1381)
28 M 26404 56 R
Pettis, Arthur L., Friendly Acres, P.O. Box 648, 67114
(283-1479)
86 M 1903 13 OO

Preheim, Delbert V., 201 S. Pine, 67114
(283-3600)
13 M 702 42 IM
Qamar, Yusuf, 203 E. Broadway, 67114
(283-2800)
38 M 70409 62 IM
Rich, Eldon S., 201 S. Pine, 67114
(283-3600)
16 M 1902 46 OBG
Schmidt, Herbert R., 1015 Washington Rd., 67114
(283-1304)
03 M 1902 34 OO
Sills, Charles T., 203 E. Broadway, 67114
(283-2800)
09 M 1902 37 IM
Tandoc, Valentin T., Jr., 201 S. Pine, 67114
(283-3600)
39 M 74809 62 U
Tompkins, Carl O., 316 Oak, 67114
(283-1380)
22 M 1902 51 FP
Vogt, Vernon W., 201 S. Pine, 67114
(283-3600)
22 M 3005 53 FP
Wiens, J. Wendell, 201 S. Pine, 67114
(283-3600)
32 M 1902 59 GS
Yoder, Vernon E., Prairie View Mental Health Center, 67114
(283-2400)
31 M 4802 61 P

NORTON—913
(Northwest Kansas Society)

Colip, F. Merlynn, 711 N. Norton, 67654
(927-3305)
35 M 1902 61 FP
Cooper, Arthur E., 305 Wilberforce, 67654
(927-2126)
08 M 1611 34 OO
Hartley, Roy W., 711 N. Norton, 67654
(927-3305)
37 M 1902 63 FP
Hartman, Roger L., 711 N. Norton, 67654
(927-3305)
35 M 1902 61 FP
Long, Robert C., 711 N. Norton, 67654
(927-3305)
27 M 1902 53 GS

NORTONVILLE—913
(Jefferson County Society)

Madison, Willard A., 66060
(886-2110)
20 M 1902 51 FP

OAKLEY—913
(Northwest Kansas Society)

Ohmart, Richard V., Box 756, 67748
(672-3262)
36 M 1902 62 FP
Sekavec, Gordon B., 209 Center, 67748
(672-3351)
07 M 1902 38 FP

OBERLIN—913
(Northwest Kansas Society)

Whitaker, Ren R., 504 N. Penn, 67749
(475-2222)
37 M 5404 66 FP

OLATHE—913
(Johnson County Society)

Aronoff, Michael E., 600 E. Santa Fe, 66061
(782-3953)
39 M 1604 64 OTO
Beebe, Edmer, 420 E. Cedar, 66061
(782-0443)
03 M 5605 32 OO
Chenoweth, John R., D.O., 401 Clairborne, 66061
(782-2442)
36 M 2840 70 OST
Delphia, Robert E., 401 Clairborne Dr., 66061
(782-1610)
24 M 1902 56 FP
Fortune, Cedric B., 405 Clairborne, 66061
(782-3322)
40 M 1902 66 FP
Glazzard, Charles D., 405 Clairborne, 66061
(782-3384)
28 M 2507 56 P
Holman, Melvin V., Shawnee Mission Med. Center, 66061
(831-8592)
20 M 1902 51 ANES
Hopke, Harold L., R.R. #1, Box 95, 66061
(441-1184)
03 M 512 34 OO
Laird, Dale D., One Patrons Plaza, 66061
(782-3631)
42 M 1902 68 OPH
Matthew, William L., 405 Clairborne, 66061
(782-3322)
29 M 1902 56 FP
McCann, William, 540 E. Santa Fe, 66061
(782-0262)
22 M 3901 48 FP
Pierron, George J., 540 E. Santa Fe, 66061
(782-0260)
22 M 1902 47 FP
Pincomb, Arthur L., 401 Clairborne, 66061
(782-1415)
20 M 1902 51 FP
Seaman, Lauren I., 401 Clairborne, 66061
(782-1415)
07 M 6001 38 FP
Sheffer, Keith D., 405 Clairborne, 66061
(782-1148)
37 M 1720 67 ORS
Soeldner, James O., 405 Clairborne, 66061
(782-3322)
44 M 1902 70 FP
Stopple, John A., 405 Clairborne, 66061
(782-3073)
42 M 5605 69 OBG
Thorn, Druery R., 14111 Pflumm Rd., 66061
(782-1390)
30 M 3607 57 ANES

Waugh, George L., 507 W. Park, 66061
(782-1390)
28 M 401 59 OBG

ONAGA—913
(Pottawatomie County Society)

Fleckenstein, Charles S., Box 125, 66521
(889-4241)
07 M 1902 36 FP
Walsh, Eugene A., 100 W. 8th, 66521
(889-4241)
18 M 3006 42 FP

OSAGE CITY—913
(Flint Hills Society)

Williams, Homer J., 524 Market, 66523
(528-3211)
05 M 1902 31 FP

OSAWATOMIE—913
(Miami County Society)

Appenfeller, William O., 524 Brown, 66064
(755-3166)
25 M 1902 53 FP
Fowler, James T., 507 6th St., 66064
(755-3101)
12 M 1902 36 FP
Keil, James E., Osawatomie State Hosp., 66064
(755-3151)
44 M 1902 70 P
Ridlon, Albert M., Box 500, 66064
(755-3151)
18 M 1902 51 P

OSBORNE—913
(Osborne County Society)

Cornely, John F., 431 W. New Hampshire, 67473
(346-5493)
20 M 4113 50 GS

OSWEGO—316
(Labette County Society)

Burgess, Arthur P., 504 5th St., 67356
(795-4427)
19 M 1902 52 FP
Liujuluschan, Rit, Oswego Clinic, 67356
(795-2511)
41 M 89101 68 GS
Paranjothi, Subramoniam P., Oswego Clinic, 67356
(795-2511)
39 M 49531 64 IM

OTTAWA—913
(Franklin County Society)

Gollier, Robert A., 312 E. 11th, 66067
(242-2393)
13 M 1902 37 OO
Gollier, Robert A., II, 1320 S. Ash, 66067
(242-1620)
40 M 1902 67 FP
Hadley, Delmont C., 1320 S. Ash, 66067
(242-3891)
35 M 1902 64 FP
Henning, Calvin W., 1502 S. Cedar, 66067
(242-2641)
05 M 1902 35 FP
Laury, David G., 1320 S. Ash, 66067
(242-1620)
17 M 1606 44 FP
Lofgreen, Sylva Y., R.R. #3, 66067
(242-3686)
98 F 1902 32 OO
Lofgreen, Victor, 203 W. 3rd, 66067
(242-2126)
97 M 1902 32 FP
Philgreen, Donald E., 1302 S. Main, 66067
(242-3891)
39 M 1602 67 FP
Reyes, Francisco A., Jr., 1302 S. Main, 66067
(242-1620)
38 M 74801 61 GS
Speer, Louis N., 109 W. 4th, 66067
(242-1257)
14 M 1606 41 FP
Strehlow, Chester H., 1320 S. Ash, 66067
(242-3891)
30 M 1902 57 FP

OVERBROOK—913
(Shawnee County Society)

Ruble, James L., Jr., 66524
(665-2205)
26 M 1902 53 FP

OVERLAND PARK (*see* Shawnee Mission)

PAOLA—913
(Miami County Society)

Banks, Robert E., 110 S. Agate, 66071
(294-2305)
29 M 1902 55 FP
Rowlett, Jack G., 2 Holly Lane, 66071
(294-2356)
21 M 1902 52 FP
Stanley, Rex C., 2 Holly Lane, 66071
(294-2356)
24 M 1902 52 GS

PARSONS—316
(Labette County Society)

Aves, Agnes J., 1509 Main, 67357
(421-0600)
38 F 74801 59 IM
Aves, Renato B., 1509 Main, 67357
(421-0600)
35 M 74801 59 GS
Bair, Howard V., Parsons State Hosp., 67357
(421-6550)
18 M 1902 43 P
Borklund, Maurice K., Katy Mem. Hosp., 67357
(421-2700)
21 M 1720 50 GS

Cramer, Guy W., 1509 Main, 67357
(421-0600)
11 M 1902 39 GS
DeBriere, Sidney L., Box 738, 67357
(421-6550)
19 M 702 52 PD
Gorrell, Ned B., 1509 Main, 67357
(421-0600)
21 M 1902 54 R
Henderson, Charles F., 1509 Main, 67357
(421-0600)
14 M 1902 40 FP
Hermann, Charles G., 303 Crestview, 67357
(421-4880)
24 M 3005 47 PATH
Martin, Earl A., 1516 Grand, 67357
(421-4595)
07 M 1606 35 OO
Miller, Charles H., 2819 Clark, 67357
(421-6422)
07 M 3006 32 OO
Miller, Dean M., 706 Neozho Ct., 67357
(421-3116)
22 M 1902 48 R
Pace, John D., 115½ S. 18th, 67357
(421-1010)
94 M 1902 20 FP
White, John P., 1509 Main, 67357
(421-0600)
17 M 1902 42 FP

PHILLIPSBURG—913
(Central Kansas Society)

Combs, Peter S., 742 4th St., 67661
(543-6223)
14 M 4101 41 GS
Steinkruger, Verlyn W., 625 3rd St., 67661
(543-5211)
28 M 3005 53 FP

PITTSBURG—316
(Crawford County Society)

Benage, Clarence H., 1601 S. College, 66762
(231-5454)
02 M 2834 27 OO
Berkey, Vernon A., 617½ N. Broadway, 66762
(231-7650)
18 M 1902 43 R
Bierlein, Kenneth J., 905 N. Locust, 66762
(231-6060)
06 M 1606 33 A
Braun, William T., 214 Elmwood Dr., 66762
(231-6821)
10 M 4706 35 OO
Coomer, Tyler E., 315 National Bank Bldg., 66762
(231-7730)
30 M 2101 59 GS
Elliott, Howard R., 603 N. Pine, 66762
(231-5650)
13 M 1902 42 FP
Erickson, Clarence W., 217 Natl. Bank Bldg., 66762
(231-7400)
06 M 1902 33 IM
Esch, John G., 207 Kirkwood Bldg., 66762
(231-5360)
24 M 3006 48 GS
Gomez, Modesto S., 2607 California, 66762
(231-6280)
35 M 72601 63 PD
Gregory, Arlene, P.O. Box 457, 66762
(231-6100)
36 F 1102 66 ANES
Holsinger, Donald M., 207 Prof. Bldg., 66762
(231-5900)
38 M 1902 64 IM
Leffler, Paul B., 212 Natl. Bank Bldg., 66762
(231-2810)
02 M 1902 40 IM
Lyons, Dave J., 107 W. 4th, 66762
(231-5160)
07 M 2834 30 FP
McKee, Dick B., 1500 S. College, 66762
(231-0330)
96 M 1902 28 FP
Miller, Earl E., 1312 S. Broadway, 66762
(231-6410)
13 M 1902 37 EENT
Neighbor, Ernest H., 2309 Tucker Ave., 66762
(232-1600)
40 M 1902 66 ORS
Newman, Clifford B., 1204 E. 7th, 66762
(231-7470)
01 M 1902 28 OO
Pogson, George W., 207 Professional Bldg., 66762
(231-5900)
24 M 1902 47 IM
Schlemmer, Roger B., 210 Prof. Bldg., 66762
(231-6380)
37 M 1902 68 OPH
Tweet, Frederick A., 2007 Countryside Dr., 66762
(231-6100)
39 M 1602 66 PATH
Wood, Douglas H., 617 N. Broadway, 66762
(231-0360)
11 M 5605 36 FP

PLAINVILLE—913
(Central Kansas Society)

Page, Vale, 409 S. Cochran, 67663
(434-4609)
20 M 1902 51 FP
Pederson, Arnold M., 409 S. Cochran, 67663
(434-4609)
22 M 1902 51 FP

PLEASANTON—913
(Bourbon County Society)

Justus, William J., 66075
(352-6134)
29 M 1902 55 FP

PRAIRIE VILLAGE (*see* Shawnee Mission)

PRATT—316
(Pratt-Kingman Society)

Barker, Patrick N., 1219 E. First, 67124
(672-5816)
45 M 1902 71 GS
Black, Cyril V., 223 E. 4th, 67124
(672-6403)
05 M 4802 30 GS
Filley, Vernon W., 310 E. 2nd, 67124
(672-5555)
13 M 3005 43 GS
Freeman, F. Giles, 310 E. 2nd, 67124
(672-5555)
18 M 1902 44 FP
Jacks, J. Warren, 602 E. 2nd, 67124
(672-5559)
23 M 1902 48 FP
Pitman, Will D., 119 S. Oak, 67124
(672-5461)
98 M 1902 25 EENT
Porter, William J., Pratt Co. Hospital, 67124
(672-6476)
26 M 1902 53 R
Thorpe, Francis A., 310 E. 2nd, 67124
(672-5555)
08 M 1606 35 FP
Wolff, Frederick P., 223 E. 4th, 67124
(672-6403)
20 M 1902 44 IM

PROTECTION—316
(Iroquois County Society)

Glenn, Lyle G., Box 447, 67127
(622-4686)
12 M 1606 40 FP

QUINTER—913
(Northwest Kansas Society)

Gunter, Carl C., 116 E. 4th, 67752
(754-3333)
20 M 1902 51 FP
Hiesterman, Herman W., 116 E. 4th, 67752
(754-3333)
23 M 1902 51 FP

RANSOM—913
(Central Kansas Society)

McLain, Kenneth, Box 247, 67572
(731-2295)
21 M 1902 46 FP

RILEY—913
(Riley County Society)

Oltman, Theodore V., Box 68, 66531
(485-2549)
00 M 1601 29 FP

RUSSELL—913
(Central Kansas Society)

Merkel, Earl D., 326 N. Main, 67665
(483-2178)
32 M 1902 57 FP
Pettijohn, Walter J., 213 W. 7th, 67665
(483-2133)
12 M 1902 37 GS
Starkey, Jerald L., 326 N. Main, 67665
(483-2178)
30 M 1902 56 FP
Swann, Clair L., 724½ Main, 67665
(483-4212)
13 M 1902 39 IM
White, Fagan N., 213 W. 7th, 67665
(483-2133)
11 M 702 36 GS

SABETHA—913
(Northeast Kansas Society)

Annamalai, P. R., 824 Main, 66534
(284-3471)
23 M 49516 55 IM
Brown, Virgil E., 1018 Main, 66534
(284-2141)
06 M 1902 37 FP
Hunnicutt, Cecil C., 1018 Main, 66534
(284-2141)
04 M 512 32 GS
Montgomery, Thomas A., 1018 Main, 66534
(284-2141)
10 M 1902 49 FP

ST. FRANCIS—913
(Northwest Kansas Society)

Cram, Ernest R., Box 625, 67756
(332-2126)
24 M 1902 52 FP
Stephenson, Lucille C., 67756
(332-3232)
06 F 1902 32 FP
Walz, Thomas J., 604 S. Benton, 67756
(332-3175)
94 M 1902 21 OO

ST. JOHN—316
(Stafford County Society)

Quackenbush, Robert P., 67576
(549-3471)
21 M 1611 52 FP
Scherer, Alfred L., 610 E. First, 67576
(549-3261)
32 M 1902 57 FP
Willis, Jon T., 610 E. 1st, 67576
(549-3233)
38 M 3901 65 FP

ST. MARYS—913
(Pottawatomie County Society)

Brown, Fred E., 602 W. Palmer, 66536
(437-2256)
26 M 1902 55 FP
Smith, Orval L., 521 W. Bertrand, 66536
(437-6226)
12 M 1902 38 FP

SALINA—913
(Saline County Society)

Allen, Monte L., 600 S. Santa Fe, 67401
(827-0307)
36 M 1902 61 ENT

Anderson, Jody, 737 E. Crawford, 67401
(827-7261)
32 F 1902 59 IM

Armstrong, Carroll W., 715 United Bldg., 67401
(823-2632)
08 M 3006 33 OTO

Brungardt, Bernard A., 400 E. Beloit, 67401
(827-5170)
21 M 3006 46 ANES

Calderwood, William A., 135 E. Claflin, 67401
(827-9631)
41 M 1902 68 FP

Coffey, Roy B., 671 Elmore Dr., 67401
(823-6397)
24 M 1902 47 ORS

Cultron, Frank T., 800 E. Crawford, 67401
(823-8151)
10 M 1643 38 OPH

Dowell, James C., 645 E. Iron, 67401
(827-7255)
26 M 1611 49 IM

Draemel, H. Richard, 600 S. Santa Fe, 67401
(827-0307)
18 M 1902 53 OTO

Dreher, Henry S., 737 E. Crawford, 67401
(827-7261)
18 M 1902 43 IM

Eaton, Glen E., RFD #3, Box 94B, 67401
(827-3064)
28 M 1902 54 ANES

Eaton, Leslie F., 737 E. Crawford, 67401
(827-7261)
06 M 1902 32 GS

Ellison, Paul D., 600 S. Santa Fe, 67401
(827-0307)
35 M 2105 60 OPH

Farrell, George E., 400 S. Santa Fe, 67401
(827-4411)
23 M 2407 48 R

Feighny, Robert E., 519 S. Santa Fe, 67401
(827-4424)
20 M 1902 51 ORS

Freeman, Raymond S., 737 E. Crawford, 67401
(827-7261)
20 M 702 50 PD

Gans, Frederick A., 737 E. Crawford, 67401
(827-7261)
22 M 2834 46 PD

Goering, Donald D., Box 1593, 67401
(825-0221)
31 M 1902 56 FP

Gunn, Marvin R., 2142 Edgehill Rd., 67401
(827-9526)
28 M 3901 54 R

Harris, Norman R., 737 E. Crawford, 67401
(823-6455)
30 M 1902 59 OBG

Hartenbower, Carey A., 617E United Bldg., 67401
(827-9526)
20 M 1902 51 R

Hatton, Lloyd W., 406 United Bldg., 67401
(827-6256)
06 M 1902 33 P

Hodges, Merle A., 737 E. Crawford, 67401
(823-6455)
34 M 1902 58 OBG

Holman, Jon B., 600 S. Santa Fe, 67401
(827-9366)
33 M 1902 63 P

Jackson, Delmas A., Jr., 645 E. Iron, 67401
(827-7255)
35 M 2101 60 IM

Jenkins, Neal M., 135 E. Claflin, 67401
(827-9631)
19 M 1902 49 IM

Lake, Max S., 600 S. Santa Fe, 67401
(827-0307)
19 M 3005 43 OPH

Lasley, David A., 645 E. Iron, 67401
(827-9635)
22 M 1606 47 U

Livingston, Charles E., 135 E. Claflin, 67401
(827-9631)
32 M 1611 57 GS

Lungstrum, Jack E., 645 E. Iron, 67401
(823-2215)
21 M 1902 59 ORS

Macy, Norman E., 1917 Ridgeview, 67401
(827-4053)
35 M 1902 60 PATH

Marchbanks, Donald L., 514 United Bldg., 67401
(825-5469)
24 M 1902 51 FP

Martin, Oliver L., 135 E. Claflin, 67401
(827-9631)
08 M 1902 37 OBG

Mathis, Jerry L., 617A United Bldg., 67401
(827-9343)
35 M 1902 62 PDA

Maxwell, Gordon E., 135 E. Claflin, 67401
(827-9631)
29 M 1902 55 OBG

McCrae, Spencer C., 519 S. Santa Fe, 67401
(827-4424)
18 M 3509 43 ORS

Miller, Elden V., 1928 Ridgelea Dr., 67401
(823-3242)
19 M 1902 44 ANES

Mitchell, John C., 617 United Bldg., 67401
(827-3061)
13 M 1902 38 GS

Mowery, William E., 737 E. Crawford, 67401
(827-7261)
23 M 1902 47 GS

Nickell, Wendell K., 315 United Bldg., 67401
(827-9618)
26 M 1606 50 TS

Null, William G., 135 E. Claflin, 67401
(827-9631)
31 M 102 57 PD

Obando, Guillermo, Asbury Hosp., 67401
(827-4411)
35 M 26404 62 R
Palmer, Gerald K., St. John's Hospital, 67401
(827-5591)
24 M 1803 53 PATH
Rassa, Reza P., P.O. Box 1608, 67401
(827-4411)
33 M 51701 59 R
Reece, Richard J., 617 D United Bldg., 67401
(827-9526)
23 M 1902 49 R
Roderick, James E., 645 E. Iron, 67401
(827-9635)
23 M 1902 47 U
Romeiser, Rex S., 645 E. Iron, 67401
(827-9635)
41 M 1902 67 U
Rueb, Andrew E., 406 United Bldg., 67401
(827-6691)
11 M 1606 35 GS
Schwartz, John H., 737 E. Crawford, 67401
(827-7261)
44 M 1902 70 FP
Scott, Chester E., 519 S. Santa Fe, 67401
(827-5549)
23 M 1902 51 FP
Simpson, J. Colbert, 308 W. South, 67401
(827-3911)
07 M 3006 38 OBG
Sloo, Milo G., 645 E. Iron, 67401
(823-2215)
41 M 1902 67 ORS
Smith, Harold R., 737 E. Crawford, 67401
(827-7261)
19 M 1902 51 FP
Taylor, Thomas F., 430 S. Ohio, 67401
(827-0346)
26 M 1902 53 FP
Wagenblast, Howard R., 737 E. Crawford, 67401
(827-7261)
21 M 1902 49 FP
Waters, Clarence N., 519 United Bldg., 67401
(823-6497)
13 M 2834 48 D
Weber, Clarence J., 156 Overhill, 67401
(823-6182)
00 M 1902 39 PATH
Weber, Robert W., 645 E. Iron, 67401
(827-7255)
26 M 1902 49 IM

SCOTT CITY—316
(Southwest Kansas Society)

Fields, Galen W., 202 College, 67871
(872-2187)
15 M 1902 49 FP
Hopkins, B. Morris, 804 Crescent Dr., 67871
(872-2187)
23 M 1902 53 FP
Palmer, H. Preston, P.O. Box 457, 67871
(872-2500)
97 M 1902 29 OO

SEDAN—316
(Southeast Kansas Society)

Taylor, Elmer W., R.R. #2, 67361
(725-3141)
28 M 512 57 FP
Walker, William K., 111 E. Cherokee, 67361
(725-3171)
18 M 1902 45 FP

SENECA—913
(Northeast Kansas Society)

Berkley, Norman W., 15 S. 5th, 66538
(336-2128)
31 M 1902 63 FP
Gilbert, J. Howard, 522 Main, 66538
(336-2414)
05 M 1902 41 FP

SHARON SPRINGS—913
(Northwest Kansas Society)

Chung, John J., Wallace Co. Med. Clinic, 67758
(852-4214)
23 M 58301 48 FP

SHAWNEE MISSION (Mission, Leawood, Lenexa, Prairie Village, Overland Park)—913
(Johnson County Society)

Allen, Lewis G., 7301 Mission Rd., 66208
(362-2222)
21 M 1902 45 R
Allen, William R., 7301 Mission Rd., 66208
(362-2222)
22 M 1902 46 R
Altenbernd, Elvin C., 7319 W. 81st, 66204
(648-2010)
26 M 1902 54 FP
Alvarez, Luis A., 8100 Marty, 66204
(649-3400)
32 M 64914 61 FP
Arakawa, Kasumi, 7917 El Monte, 66208
(381-8454)
26 M 57211 53 ANES
Arenal, Angela C., 2000 W. 61st Terr., 66208
(621-6600)
38 F 35204 60 ANES
Armbruster, Albert A., 9119 W. 74th St., 66204
(362-9220)
17 M 512 55 GS
Athon, Merrill D., 6806 W. 83rd, 66204
(642-4242)
24 M 1902 54 FP
Baeke, John O., 6806 W. 83rd, 66204
(642-4242)
19 M 1902 52 FP
Bansal, Satish C., 8100 Marty, 66204
(649-3400)
38 M 49541 61 ORS
Barker, Elizabeth B., 4121 W. 83rd, 66208
(381-6669)
30 F 4706 55 P
Barker, James B., 8686 W. 96th, 66212
(381-3338)
31 M 4706 55 OTO

Barr, Richard N., 7301 Mission Rd., 66208
(432-4366)
32 M 1902 57 OPH
Barrick, Bruce, Med. Center, 66204
(831-8914)
39 M 1902 65 PATH
Batty, Thomas V., 5555 W. 58th, 66207
(432-2080)
21 M 3806 54 FP
Bell, Deloris J., 4601 W. 109th, 66211
(341-6550)
42 F 1902 68 OPH
Belzer, Edward G., 7301 Mission Road, 66208
(362-9601)
36 M 3005 58 PD
Berger, Dan L., 9119 W. 74th, 66204
(432-1426)
18 M 4812 48 OBG
Billingsley, Thad H., 5555 W. 58th, 66202
(432-2080)
41 M 1902 66 P
Bishop, Francis E., 7501 Mission Rd., 66208
(648-3533)
20 M 1902 45 P
Bletz, Donald B., 6100 Martway, 66202
(362-7290)
28 M 5104 58 IM
Boles, J. Michael, 5949 Nieman Rd., 66203
(631-1300)
35 M 1902 61 FP
Bridgens, James G., Med. Center, 66204
(831-8915)
22 M 1902 47 PATH
Brown, Robert W., 10322 Wenonga, 66203
(831-5100)
23 M 1902 55 IM
Brown, William R., 7301 Mission Rd., 66208
(236-8866)
23 M 1902 48 IM
Burger, Paul B., 5638 Nieman Rd., 66203
(631-6114)
25 M 2834 50 FP
Cain, Ivan W., 7301 Mission Rd., 66208
(362-7811)
18 M 1902 44 ORS
Calkins, Larry L., 5100 West 95th, 66207
(649-0110)
18 M 1902 43 OPH
Carduff, Jay J., 6300 Glenwood, 66202
(432-4480)
25 M 3006 54 FP
Carrasco, Lenore C., 5811 Outlook, 66202
(432-0625)
41 F 74801 63 A
Catlett, Jack M., 7301 Mission Rd., 66208
(362-0275)
27 M 1902 54 IM
Cavitt, Robert F., 9119 W. 74th, 66204
(831-0700)
24 M 1902 48 GS
Chang, Shu-Fang, 5311 Walmer, 66202
(362-5702)
25 F 24239 49 P
Coe, David L., 6100 Martway, 66202
(362-7290)
36 M 1902 66 FP
Coe, Richard O., 7301 Mission Rd., 66208
(362-8505)
31 M 4804 56 OPH
Cohn, Steven G., 7907 W. 99th St., 66212
(383-2581)
41 M 1902 67 RES (U)
Cooper, Jack R., 6100 Martway, 66202
(432-6300)
17 M 3840 43 NS
Corbin, Murray D., 6100 Martway, 66202
(362-7290)
39 M 1902 65 CD
Coulter, Henry F., 5829 Woodson Rd., 66202
(722-1100)
23 M 1902 51 FP
Cox, Ira, Jr., 5829 Woodson, 66202
(722-1100)
19 M 1902 49 FP
Curran, Kevin E., 4121 W. 83rd, 66208
(649-9383)
39 M 2803 65 OPH
Darr, Richard B., 9114 Riggs Lane, 66212
(341-8278)
42 M 3401 70 RES(IM)
DeMott, Wayne R., 4914 Belinder, 66205
(621-5335)
34 M 4002 59 PATH
Denison, Terry R., 5829 Woodson Rd., 66202
(722-1106)
29 M 1902 56 PD
Dockhorn, Robert J., 7501 Mission Rd., 66208
(381-4674)
34 M 1902 60 PDA
Doherty, William R., 7600 State Line, 66208
(649-3900)
20 M 3006 56 FP
Duerksen, Joseph J., 4407 W. 54 Terr., 66205
(831-6670)
27 M 1902 54 ANES
Esrig, Harold L., D.O., 8132 Sagamore, 66206
(381-5033)
30 M 2840 60 ANES
Etzenhouser, Russell D., 7301 Mission Rd., 66208
(362-9601)
34 M 1902 59 PD
Evans, William E., Jr., 7301 Mission Rd., 66208
(362-7363)
24 M 1902 58 FP
Felt, Samuel D., 10802 W. 75th Terr., 66214
(831-7100)
46 M 1902 72 RES (PATH)
Gardner, Glenn M., 9119 W. 74th, 66204
(236-7066)
35 M 2803 60 IM
Gentry, Kale C., 6806 W. 83rd, 66204
(642-4242)
31 M 1902 60 FP
Gilbert, Roberta M., 4121 W. 83rd, 66208
(341-5700)
35 F 3506 62 P

Gill, Bruce D., 9119 W. 74th, 66204
(831-2334)
35 M 1902 61 OBG

Gillen, Billy A., 8802 Birch Lane, 66207
(381-0521)
29 M 1902 54 P

Gloyne, Howard F., 6815 Floyd, 66204
(262-6413)
21 M 1902 46 OO

Gomez, Francisco, 4000 Somerset Dr., 66208
(649-7300)
15 M 26401 43 P

Good, Wendell L., 9521 Mission Rd., 66206
(649-3883)
24 M 1902 48 FP

Grady, Kenneth L., 4000 Somerset Dr., 66208
(649-5566)
36 M 1902 69 P

Grayson, Roy D., 8020 Santa Fe, 66204
(642-4080)
90 M 1902 19 FP

Greenberg, M. Taylor, 4121 W. 83rd, 66208
(381-3117)
42 M 5104 67 IM

Hamtil, Lawrence W., 3700 W. 83rd, 66208
(649-6722)
36 M 2803 61 OPH

Hard, Benjamin F., 7301 Mission Rd., 66208
(362-2340)
28 M 4802 55 OBG

Harms, Albert C., 5750 W. 95th, 66207
(381-5550)
13 M 1902 38 FP

Harned, Bert W., Shawnee Mission Med. Center, 66204
(831-8592)
24 M 1606 47 ANES

Harpster, Gene O., 4500 W. 89th, 66207
(648-1400)
31 M 1902 57 GS

Herzon, Charles D., 6100 Martway, 66202
(432-2171)
39 M 3006 65 OBG

Hesser, Herbert H., 7207 Edgewood Blvd., 66203
(631-3121)
06 M 1902 34 OO

Hiatt, W. Stewart, 7301 Mission Rd., 66208
(362-6888)
31 M 502 56 GS

Hiller, F. Charles, 5206 Clark Dr., 66205
(236-9243)
42 M 1902 68 IM

Hobson, Milburn W., 9119 W. 74th, 66204
(831-2334)
30 M 1902 55 OBG

Hopkins, Lenly T., Jr., 8600 W. 95th, 66212
(649-7844)
30 M 3841 56 GS

Hopkins, William O., 8600 W. 95th, 66212
(649-3202)
33 M 2803 61 ORS

Horseman, Robert F., 9119 W. 74th, 66204
(432-7419)
19 M 1902 44 OBG

Iturralde, George, 7501 Mission Rd., 66208
(648-4949)
21 M 13201 49 P

Johnson, John E., 6101 Martway, 66202
(432-5141)
17 M 4706 43 PATH

Jones, Charles E., 74th & Grandview, 66204
(831-8555)
31 M 1902 60 FP

Jones, H. Ivor, 4000 Somerset Dr., 66208
(381-1331)
24 M 80303 51 P

Jorg, Helen H., 7500 W. 95th, 66212
(381-5072)
21 F 2802 53 ANES

Kennedy, Kenneth R., 6100 Martway, 66202
(432-0126)
24 M 1902 53 FP

Kodanaz, A. Aytekin, 5710 Reinhardt Dr., 66205
(621-5335)
28 M 90201 55 ANES

Kozikowski, Ben M., 7301 Mission Rd., 66208
(362-8317)
30 M 2834 55 ORS

Kubin, Doris, 2504 W. 71st, 66208
(371-4343)
15 F 1902 43 R

Kurth, Robert H., 5555 W. 58th St., 66202
(432-2080)
28 M 3005 53 IM

Lambright, Robert L., 2108 West 75th, 66208
(262-6380)
26 M 4705 50 P

Lapi, Ruth, 2012 Stratford Rd., 66208
(362-4127)
14 F 4107 37 OO

Latimer, Lester A., 3727 W. 65th, 66208
(262-5024)
84 M 2820 09 OO

Lee, Jae M., 8100 Marty, 66204
(649-3400)
0 M 58302 65 GS

Legaspi, Pedro L., Jr., Shawnee Mission Hospital, 66204
(831-8592)
36 M 74801 60 ANES

Leigh, Lawrence E., 8020 Santa Fe Dr., 66204
(642-4080)
12 M 1902 41 FP

Lewin, Walter, 4000 Somerset Dr., 66208
(381-1331)
30 M 1902 56 P

Lewis, James E., 3700 W. 83rd, 66208
(649-0923)
37 M 2101 63 P

Lipsey, James H., 7301 Mission Rd., 66208
(362-8317)
31 M 1606 56 ORS

Lovett, Rodney C., 5015 W. 71st Terr., 66208
(685-2151)
46 M 1902 72 Res(GS)

Martin, Daniel C., 9119 W. 74th, 66204
(236-7066)
30 M 1902 58 IM
Maser, George R., 5808 Nall, 66202
(432-5515)
12 M 1902 36 FP
McCaughey, Hugh W., 11055 Cedar, 66211
(381-1724)
28 M 1902 53 IM
McEachen, William H., 3700 W. 83rd, 66208
(649-3335)
32 M 1902 59 PD
McGurk, Thomas E., 4601 W. 109th, 66211
(649-2080)
39 M 2803 65 P
Melendres, Juanito M., 5949 Nieman Rd., 66203
(631-3777)
36 M 74809 61 PD
Melia, B. James, Jr., 3700 W. 83rd, 66208
(648-4117)
33 M 2803 60 D
Menendez, Jose O., 6000 Lamar, 66202
(384-1100)
25 M 27501 54 P
Menez, Cesar V., 9350 Robinson, 66212
(649-9876)
36 M 74810 56 P
Mercer, James B., 13109 W. 95th, 66215
(888-5442)
21 M 1902 51 FP
Muehlberger, James J., 3700 W. 83rd, 66208
(649-3335)
34 M 3006 60 PD
Mueller, J. Kent, 3700 W. 83rd, 66208
(649-0923)
35 M 1902 62 P
Nash, Robert A., 4601 W. 109th, 66211
(649-8686)
31 M 1902 55 P
Nieman, John L., 7301 Mission Rd., 66208
(362-9601)
28 M 3806 58 PD
Nosti, Juan C., 7301 Mission Rd., 66208
(262-5014)
38 M 13204 63 PS
Oktawiec, Danuta, 5848 Fontana Dr., 66205
(236-6261)
22 F 80303 50 ANES
Osgood, George M., 3700 W. 83rd, 66208
(381-5200)
14 M 1902 44 IM
Pashino, Antonio, 1922 W. 50th Terr., 66205
(831-6400)
22 M 13201 60 P
Patterson, John R., 6300 Glenwood, 66202
(432-8020)
20 M 1902 48 PD
Pearce, Eugene W. J., 9119 W. 74th, 66204
(831-2334)
24 M 2802 49 OBG
Pearce, Lunetta A. M., 9119 W. 74th, 66204
(362-1525)
26 F 3005 49 FP
Pentecost, Richard L., 8900 State Line, 66206
(383-1410)
32 M 1001 56 P
Petersen, A. Gene, 3700 W. 83rd, 66208
(648-3911)
27 M 1902 54 IM
Petersen, Gerald D., 3700 W. 83rd, 66208
(648-3911)
30 M 1902 60 IM
Petrie, Samuel C., 6100 Martway, 66202
(722-1166)
27 M 1902 58 IM
Pettegrew, Pauline K., 4140 W. 71st, 66208
(362-1034)
21 F 3006 50 FP
Phillips, Warren G., 3700 W. 83rd, 66208
(649-0923)
26 M 1902 60 P
Pitts, Ronald L., 7301 Mission Rd., 66208
(362-2524)
35 M 2002 62 D
Pol, P. Albert, 3000 W. 50th, 66205
(831-6400)
36 M 84710 P
Powell, Carol W., 8216 Cherokee Circle, 66206
(381-3785)
25 F 1902 51 P
Pronko, Michael J., 4121 W. 83rd, 66208
(649-7878)
34 M 1902 60 P
Rajanna, Krishna, 74th & Grandview, 66204
(831-8559)
37 M 49509 63 GS
Reivich, Ronald S., 10901 Granada Lane, 66211
(383-3050)
34 M 3806 60 P
Rieke, Frank A., 10411 W. 55th St., 66203
(432-1208)
16 M 1902 41 GS
Rohr, Joseph H., 6100 Martway, 66202
(262-6606)
13 M 1902 42 A
Rosenberg, Stanton L., 10901 Granada Ln., 66211
(383-3050)
30 M 1902 55 P
Rubin, Herbert M., 7301 Mission Rd., 66208
(362-6000)
37 M 2803 63 PD
Rumold, Mervin J., 6340 Indian Lane, 66208
(362-7010)
03 M 1902 30 GS
Saffo, Karl S., 10200 W. 75th, 66204
(362-9585)
39 M 52801 62 PS
Sawkar, Laxmidas A., 7301 Mission Rd., 66208
(384-4844)
36 M 49523 63 IM
Schaefer, Joseph P., 7301 Mission Rd., 66208
(362-2975)
36 M 1902 60 IM
Schlozmann, Daniel L., 7301 Mission Rd., Suite 333, 66208
38 M 1902 64 PUD

Schwegler, Raymond A., 6100 Martway, 66202
(362-7290)
37 M 1902 63 CD
Sevier, Samuel M., 3107 W. 21st, 66604
(296-5306)
19 M 4812 44 IM
Shaad, Dorothy J., 2322 W. 51st, 66205
(236-5033)
09 F 1902 44 OPH
Shofstall, William H., 6100 Martway, 66202
(722-4747)
11 M 3901 41 ENT
Smith, Dale C., 4601 W. 109th St., 66211
(381-0353)
20 M 1902 45 OPH
Smith, Donald J., 8600 W. 95th, 66212
(642-4515)
18 M 1902 49 FP
Snodell, Firmin E., 5555 W. 58th, 66202
(432-2080)
31 M 1902 61 IM
Speer, Frederic, 5811 Outlook, 66202
(432-0625)
09 M 1902 34 A
Stanley, John H., 8600 W. 95th, 66212
(642-7600)
36 M 1803 65 CHP
Steiner, Robert M., 5311 W. 96th Terr., 66207
(753-4011)
39 M 4112 65 R
Steinzeig, Alfred S., 6500 Hodge Dr., 66208
(432-2233)
13 M 1902 37 FP
Stevenson, E. Kent, 4000 Somerset Drive, 66208
(649-5566)
45 M 2803 67 CHP
Sulit, Arnulfo P., 9119 W. 74th, 66204
(236-7066)
36 M 74802 57 IM
Sullivan, Henry B., 5817 Nieman Rd., 66203
(631-6160)
24 M 1902 52 FP
Summerville, Ward W., 2120 W. 49th, 66205
(722-2341)
97 M 1902 27 PATH
Sutton, Richard L., Jr., 4121 W. 83rd, 66208
(381-0014)
08 M 2501 29 D
Tetzlaff, Archibald O., 6525 Granada Dr., 66208
(621-5335)
26 M 40721 52 ANES
Tice, Galen M., 134 & State Line, RR. 31, 66209
(681-2575)
99 M 1902 29 OO
Toyama, Takeko M., 2900 W. 49th Terr., 66205
(362-8908)
40 M 57220 64 ANES
Wang, Sidney W., 9119 W. 74th, 66204
(722-2020)
32 M 38503 58 FP
Weaver, Jerome A., 8600 W. 95th, 66612
(341-6244)
15 M 5404 39 PD
Webb, James R., 5949 Nieman Rd., 66203
(631-0900)
34 M 1902 61 FP
Whitehead, Richard E., 7301 Mission Rd., 66208
(362-8317)
31 M 2501 58 ORS
Whitley, Douglas M., 4601 W. 109th, 66211
(341-4770)
34 M 1902 60 DERM
Whittier, Frederick C., 6332 W. 67th Terr., 64201
(861-4700)
39 M 1643 65 IM
Wigginton, Gerald D., D.O., 9119 W. 74th, 66204
(432-9119)
44 M 2840 70 PD
Wiley, John H., 9119 W. 74th, 66204
(831-2334)
37 M 4113 63 OBG
Wilson, L. Barrick, 5602 Fairway Rd., 66205
(236-8423)
09 M 1902 35 ANES
Wilson, Robert B., 7301 Mission Rd., 66208
(362-3356)
10 M 1902 40 EENT
Wurster, George R., 3700 W. 83rd, 66208
(649-0923)
35 M 1902 61 P
Ye, Richard C., 7301 Mission Rd., 66208
(362-7505)
20 M 24222 46 PS
Yohe, Ruth M., 8600 W. 95th, 66212
(383-3377)
26 F 4107 54 PDA
Young, John W., 7301 Mission Rd., 66208
(362-7505)
37 M 4706 63 PS
Zaremski, Sherman C., 7301 Mission Rd., 66208
(362-8566)
33 M 1720 58 IM
Zimmerman, Daniel D., 1900 W. 47th, 66205
(831-0910)
45 M 3005 70 IM

SMITH CENTER—913
(Smith County Society)

Hardman, Dennis A., 120 E. Court, 66967
(282-6654)
25 M 1902 49 FP
Relihan, Francis H., 116 S. Main, 66967
(282-3291)
84 M 1606 07 FP
Sheppard, Robert G., 120 E. Court, 66967
(282-6654)
21 M 1902 45 GS
Woods, Hugh J., 120 E. Court, 66967
(282-6654)
26 M 1902 52 FP

SOUTH HAVEN—316
(Tri-County Society)

Ubelaker, Ernest J., 67140
(892-2261)
11 M 1902 38 FP

SPEARVILLE—316
(Ford County Society)

Mabunda, Guilherme A., P.O. Box 98, 67876
(385-2665)
31 M 1720 67 GS

STAFFORD—316
(Stafford County Society)

Brown, C. Everett, 102 N. Main, 67578
(234-5251)
10 M 1902 47 FP
Ward, Robert L., 115 E. Broadway, 67578
(234-5281)
24 M 1902 52 FP

STERLING—316
(Rice County Society)

Beauchamp, Preston E., 105 N. Broadway, 67579
(278-2435)
05 M 1902 34 OO
Dysart, Jack C., 112 S. Broadway, 67579
(278-2181)
12 M 1601 39 GS

STILLWELL—913
(Wyandotte County Society)

Tice, Galen M., R.R. 1, 66085
(681-2575)
99 M 1902 29 OO

STOCKTON—913
(Central Kansas Society)

Mauck, Harold C., 623 S. 2nd, 67669
(425-6280)
20 M 1902 54 FP
Votapka, William L., 623 S. 2nd 67669
(425-6280)
24 M 1902 53 FP

SUBLETTE—316
(Southwest Kansas Society)

Thiemann, Alfred H., D.O., 301 Derby, 67877
(675-2241)
12 M 1805 42 FP

SYRACUSE—316
(Southwest Kansas Society)

Marvin, Norman G., P.O. Box, 67878
(384-7431)
29 M 1902 56 FP
Petterson, Cecil E., Box 1045, 67878
(384-5731)
14 M 1902 39 FP

TONGANOXIE—913
(Leavenworth County Society)

Bell, Margaret E., 825 S. Delaware, 66086
(831-6475)
37 F 1902 63 CHP
Parker, David F., 121 E. 2nd, 66086
(845-2008)
02 M 1902 33 FP
Stevens, Philip L., Box 319, 66086
(845-2090)
27 M 1902 54 FP

TOPEKA—913
(Shawnee County Society)

Agan, Lawrence M., 1314 Pembroke Ln., 66604
(357-4306)
20 M 5002 44 R
Aleksandrowicz, Dov R., Menninger Foundation, Box 829, 66601
(234-9566)
25 M 56114 51 P
Alonso, Rene A., Continental Med. Bldg., #440, 66604
(357-6218)
20 M 27501 46 IM
Appelbaum, Ann, 3617 W. 6th, 66606
(234-9566)
24 F 3506 50 P
Ashley, B. John, Jr., 1616 W. 8th, 66606
(234-3439)
31 M 1902 56 OPH
Ashley, Byron J., 1616 W. 8th, 66606
(234-3439)
98 M 1902 24 OPH
Averill, Stuart, Menninger Foundation, Box 829, 66601
(234-9566)
24 M 502 58 P
Baehr, Ralph H., 310 Med. Arts Bldg., W, 66604
(234-3451)
35 M 1606 59 R
Bair, Glenn O., 417 E. 6th, 66607
(233-2361)
31 M 2401 57 IM
Baker, Phillip L., 300 Continental Med. Bldg., 66606
(357-0301)
37 M 3005 63 ORS
Baker, Ray D., 1615 W. 8th, 66606
(233-8961)
30 M 4812 55 GPM
Barnhill, C. Alton, Menninger Foundation, Box 829, 66601
(234-9566)
31 M 3601 56 P
Baude, André, 208 Med. Arts Bldg., E, 66604
(232-3207)
02 M 39606 27 IM
Beach, Richard R., 220 Med. Arts Bldg., W, 66604
(233-7943)
23 M 2802 48 IM
Beale, David A., Menninger Foundation, Box 829, 66601
(234-9566)
31 M 5404 56 P
Beck, Joseph D., 1425 W. 10th, 66604
(235-2351)
18 M 3005 43 PD
Bedford, D. R., 1424 W. 8th, 66606
(354-7075)
09 M 4802 40 CD

Beelman, Floyd C., 1319 Huntoon, 66604
(235-3981)
02 M 3840 35 FP

Beller, Willis L., 310 Med. Arts Bldg., W, 66604
(234-3451)
14 M 1902 41 R

Blake, Henry S., 918 W. 10th, 66604
(233-9681)
11 M 3520 37 GS

Boggs, Frank C., 1205 West 29th, 66611
(266-3880)
86 M 1903 10 OO

Bonham, Claude D., 100 E. 9th, 66612
(235-1432)
00 M 702 27 ADM

Bowen, Clovis W., 2200 W. 10th, 66604
(234-8601)
12 M 1902 37 FP

Bowen, Harry J., Jr., 2200 W. 10th, 66604
(234-8601)
11 M 1902 37 FP

Braunsdorf, Robert L., 2625 Ohio, 66605
(354-7630)
08 M 2501 35 FP

Bridwell, Russell E., 1710 W. 10th, 66604
(234-2624)
26 M 1902 51 ENT

Brooker, Robert M., 314 Med. Arts Bldg., E, 66604
(235-1170)
18 M 1902 43 TS

Broucek, Francis J., 2400 W. 29th, 66611
(266-9503)
32 M 1643 58 P

Cashman, Maurice R., Jr., 901 Garfield, 66606
(354-9591)
35 M 1902 61 IM

Cavanaugh, John W., 1710 W. 10th, 66604
(235-3488)
13 M 1803 39 GS

Chamberlin, Cecil R., Menninger Foundation, Box 829, 66601
(234-9566)
30 M 3901 55 CHP

Chediak, Charles, Menninger Foundation, Box 829, 66601
(234-9566)
27 M 27501 54 P

Cherry, Arthur C., 918 W. 10th, 66604
(233-9681)
27 M 3806 53 PD

Chesky, Frank H., Menninger Foundation, Box 829, 66601
(234-9566)
33 M 1902 59 P

Cheung, Philip W. H., 918 W. 10th, 66604
(233-9681)
36 M 24338 58 R

Choy, James K. L., 918 W. 10th, 66604
(233-9681)
10 M 1643 37 U

Clark, Craig N., 3124 E. 6th, 66607
(234-5571)
29 M 1902 58 FP

Clark, Orville R., 221 Woodlawn, 66606
(232-3305)
06 M 2802 31 OO

Clark, Shirley E., 911 N. Kansas, 66608
(234-6455)
14 M 1902 42 FP

Cohen, Louis, 918 W. 10th, 66604
(233-9681)
14 M 1902 41 IM

Cokeley, John M., Menninger Foundation, Box 829, 66601
(234-9566)
30 M 5104 55 P

Collins, Dean T., Menninger Foundation, Box 829, 66601
(234-9566)
28 M 1902 55 P

Collins, Francis T., 206 Med. Arts Bldg., E, 66604
(233-6470)
14 M 1902 43 IM

Compton, Ariel S., Menninger Foundation, Box 829, 66601
(234-9566)
23 F 511 51 RES(P)

Cotton, Robert T., 901 Garfield, 66606
(354-9591)
19 M 1902 45 IM

Crary, John E., Medical Plaza Bldg., 66604
(233-4202)
18 M 1902 43 IM

Crouch, William H., 109 Med. Arts Bldg., W, 66604
(232-8224)
20 M 2802 45 PD

Dean, David B., 1320 First Natl. Bk. Tower, 66612
(233-1344)
39 M 4804 64 P

de la Torre, Jorge, Menninger Foundation, Box 829, 66601
(234-9566)
34 M 27501 60 P

Dell'Ario, Alfred V., Menninger Foundation, Box 829, 66601
(234-9566)
43 M 1201 69 RES(P)

Dunagin, Jack A., 918 W. 10th, 66604
(233-9681)
20 M 1902 44 P

Durst, Robert D., Jr., 1706 W. 10th, 66604
(357-5166)
42 M 2803 69 D

Elder, Douglas M., 310 Medical Arts Bldg., 66604
(234-3451)
41 M 1902 69 R

Farrell, Dennis H., Menninger Foundation, Box 829, 66601
(234-9566)
26 M 5404 55 P

Feagan, Jerry, II, 901 Garfield, 66606
(354-9591)
39 M 1902 63 GE

Fernandez, Luis A., 1615 W. 8th, 66606
(233-8961)
14 M 27501 41 PD

Field, Richard A., 224 Med. Arts Bldg., W, 66604
(235-3451)
29 M 1902 55 ANES

Fillman, Eldon M., 1001 Garfield, 66604
(233-4256)
20 M 1611 44 U

Fink, A. Arthur, 105 Med. Arts Bldg., W, 66604
(234-8621)
13 M 6501 37 PATH

Ford, Fred L., 1119 W. 10th, 66604
(234-5516)
11 M 2501 36 GS

Foster, D. Bernard, V.A. Hospital, 66622
(272-3111)
14 M 2501 38 N

Ganzarain, Ramon C., Menninger Foundation, Box 829, 66601
(234-9566)
23 M 23101 47 P

Gendel, Evalyn S., Box 1192, 66601
(296-3506)
22 F 2105 49 GPM

Gendel, Joseph, 918 W. 10th, 66604
(233-9681)
12 M 4804 37 ORS

Gleason, Jimmie A., 8th & Lincoln, 66606
(233-5101)
33 M 1902 58 OBG

Goering, Emil L., 417 E. 6th, 66607
(233-2361)
27 M 1902 57 FP

Gootee, Joseph E., 224 Med. Arts Bldg., W, 66604
(235-3451)
21 M 2834 47 ANES

Gray, David E., 105 Med. Arts Bldg., 66604
(234-8621)
16 M 1606 42 GEN

Grayib, Antoine S., 417 E. 6th, 66607
(233-2361)
18 M 60501 46 IM

Green, Phillip E., Menninger Foundation, Box 829, 66601
(234-9566)
31 M 3901 56 P

Greene, Horace T., 1710 W. 10th, 66604
(354-7508)
15 M 401 42 FP

Greenwood, Edward D., Menninger Foundation, Box 829, 66601
(234-9566)
01 M 702 38 CHP

Greer, Richard H., 918 W. 10th, 66604
(233-9681)
09 M 1902 39 IM

Grigsby, George T., Jr., Stormont Vail Hosp., 66606
(234-9961)
41 M 3601 66 IM

Haines, Robert A., State Office Bldg., 66612
(296-3774)
16 M 3841 42 ADM

Halley, M. Martin, 314 Medical Arts Bldg., 66604
(354-7915)
27 M 2401 53 TS

Harris, Hubert L., 210 Med. Arts Bldg., E, 66604
(233-3151)
12 M 1803 39 D

Harris, Patricia A., 1617 W. 26th, 66611
(354-1906)
29 F 1902 54 IM

Harrison, Hall E., 901 Garfield, 66606
(354-9591)
39 M 2802 65 CD

Hartocollis, Peter, Menninger Foundation, Box 829, 66601
(234-9566)
22 M 86905 55 P

Hasselle, James E., Menninger Foundation, Box 829, 66601
(234-9566)
35 M 4706 59 P

Hinkle, Dave, Menninger Children's Hosp., Box 829, 66601
(234-9566)
36 M 4802 61 CHP

Hirschberg, J. Cotter, Menninger Foundation, Box 829, 66601
(234-9566)
15 M 1602 40 CHP

Hobart, Wilson K., 623 Mills Bldg., 66612
(235-6356)
87 M 1606 13 OPH

Hobbs, Donald D., Continental Med. Bldg., 66606
(233-7491)
28 M 2803 54 ORS

Horne, James B., 315 W. 4th, 66603
(234-2120)
26 M 1606 52 P

Hoyt, Arthur W., 2055 Clay, 66604
(234-5663)
14 M 2501 40 P

Huaman, Antonio, 105 Med. Arts Bldg., W, 66604
(234-8621)
29 M 73701 56 PATH

Huston, Joseph W., 918 W. 10th, 66604
(233-9681)
35 M 1902 63 ORS

Hutton, Frederick A., 102 Med. Plaza Bldg., 66604
(234-0553)
29 M 6701 58 PS

Jackson, Linda H., Menninger Foundation, Box 829, 66606
(234-9566)
42 F 3601 67 Res(P)

Jacoby, Robert E., II, Continental Med. Bldg., 66606
(232-9394)
46 M 2307 72 FP

Janssen, Erwin T., Menninger Fd., Box 829, 66601
(234-9566)
36 M 1803 62 P

Johnson, Frederick E., 1714 Central Park, 66604
(232-4771)
92 M 2843 21 OO

Joss, Charles S., 221 Med. Arts Bldg., 66604
(232-0444)
14 M 1606 40 GS

Joyce, G. Bernard, 200 Continental Med. Bldg., 66606 (233-7491)
17 M 1902 44 ORS

Katz, Jerome B., Menninger Foundation, Box 829, 66601 (234-9566)
22 M 2101 44 P

Kavel, Karl K., Medical Plaza Bldg., 66604 (234-2663)
36 M 3605 64 PDA

Kelly, Dan A., 109 Med. Arts Bldg., W., 66604 (232-7223)
39 M 2803 64 PD

Kennedy, Howard U., 1119 W. 10th, 66604 (233-8268)
18 M 401 44 IM

Keys, Robert C., Jr., 216 Med. Arts Bldg., 66604 (235-3451)
36 M 1902 62 ANES

Kindling, Paul H., 918 W. 10th, 66604 (233-9681)
30 M 3545 61 GS

Kirkegaard, Rodger S., 918 W. 10th, 66604 (233-6493)
30 M 1803 56 OPH

Klemmer, Herbert, Menninger Foundation, Box 829, 66601 (234-9566)
11 M 4102 37 P

Kovarik, Ernest D., 900 Washburn, 66606 (357-5171)
36 M 3005 64 OPH

Kowalski, Anthony M., Menninger Foundation, Box 829, 66601 (234-9566)
31 M 5606 56 P

Kroll, Harry G., 200 Continental Med. Bldg., 66606 (233-7491)
24 M 1602 50 ORS

Lawson, Dwight, 1119 W. 10th, 66604 (233-8268)
06 M 2802 30 IM

Lawson, Robert C., 310 Med. Arts Bldg., W, 66604 (234-3451)
25 M 801 48 R

Lee, Song P., 918 W. 10th, 66604 (233-9681)
34 M 38502 61 OTO

Lentz, William R., 308 Med. Arts Bldg., W, 66604 (235-3443)
24 M 1902 53 FF

Lessenden, Chester M., Jr., 103 Medical Plaza Bldg., 66604 (234-5533)
18 M 1902 43 D

Levy, Edwin Z., Menninger Foundation, Box 829, 66601 (324-9566)
29 M 1606 54 P

Lynch, John A., 1001 Garfield, 66604 (357-0301)
30 M 2834 55 ORS

Marshall, Bromell M., 704 Mills Bldg., 66612 (234-5742)
08 M 2802 34 U

Martin, William O., 216 Med. Arts. Bldg., W., 66604 (235-3451)
19 M 1902 44 ANES

Mau, Walter, 301 Medical Blaza Bldg., 66604 (233-4256)
16 M 1611 40 U

McCarter, Duane K., 2101 W. 10th, 66604 (233-8979)
26 M 1902 58 IM

McClellan, John W., 1710 W. 10th, 66604 (234-2624)
11 M 3006 36 ENT

McClintock, Edward A., 111 Med. Arts Bldg., E, 66604 (354-8518)
07 M 1902 33 IM

McClure, James A., 202 Medical Plaza Bldg., 66604 (233-4256)
18 M 1902 44 U

McElroy, Wilbur J., 1616 W. 8th, 66606 (234-3439)
35 M 1902 61 OPH

Mehrhof, Edward G., 900 Washburn, 66604 (234-0156)
32 M 3515 62 CHP

Meidinger, Richard, 310 Med. Arts Bldg., 66604 (234-3451)
39 M 1902 65 DR

Menninger, Karl A., Menninger Foundation, Box 829, 66601 (234-9566)
93 M 3545 17 N-P

Menninger, Robert G., Menninger Foundation, Box 829, 66601 (234-9566)
22 M 3545 52 P

Menninger, Roy W., Menninger Foundation, Box 829. 66601 (234-9566)
26 M 3520 51 P

Menninger, W. Walter, Menninger Foundation, Box 829, 66601 (234-9566)
31 M 3520 57 P

Miller, M. Kirk, Jr., 3124 E. 6th, 66607 (234-5571)
23 M 3545 48 FP

Mills, Philip E., Jr., 1119 W. 10th St., 66604 (234-5661)
36 M 1902 64 N

Modlin, Herbert C., Menninger Foundation, Box 829, 66601 (234-9566)
13 M 3005 38 P

Morris, Merle D., 1401 W. 10th, 66604 (234-2877)
21 M 1902 45 OBG

Morrison, David E., Jr., Menninger Foundation, Box 829, 66601
(234-9566)
39 M 506 65 P

Morrow, J. Tarlton, Menninger Foundation, Box 829, 66601
(234-9566)
23 M 4804 47 CHP

Moyer, John D., 202 Med. Plaza Bldg., 66604
(233-4256)
39 M 1902 65 U

Muceno, Dar, 3617 W. 6th, 66606
(234-9566)
37 M 74801 61 IM

Mueller, Arnold V., 918 W. 10th, 66604
(233-9681)
31 M 3005 57 IM

Myers, JoAnn, Menninger Foundation, Box 829, 66601
(234-9566)
28 F 1902 53 P

Nabours, Richard D., 4228 W. 29th St. Terr., 66614
(272-7190)
27 M 1902 54 FP

Nelson, James N., 918 W. 10th, 66604
(233-9681)
30 M 1902 59 P

Nice, G. William, 112 Med. Arts Bldg., E, 66604
(235-8090)
22 M 1902 46 IM

Novotny, Peter C., Menninger Foundation, Box 829, 66601
(234-9566)
30 M 15407 55 P

Nystrom, Curtis A., 2707 W. 29th, 66614
(272-8440)
23 M 1902 54 FP

Obourn, Robert L., 1150 Oakley, 66604
(272-2284)
19 M 2802 50 P

O'Neil, Robert H., 901 Garfield, 66606
(354-9591)
20 M 1902 45 IM

Parman, Robert D., 109 Med. Arts Bldg., W, 66604
(232-8224)
27 M 1902 54 PD

Payne, Robert R., 200 Continental Med. Bldg., 66606
(233-7491)
29 M 1902 55 ORS

Pendharker, M. B., Memorial Hospital, 66607
(233-2361)
39 M 49501(b) 61 IM

Penn, George M., Menninger Foundation, Box 829, 66601
(234-9566)
30 M 4802 58 P

Peterson, Dean L., 224 Med. Arts Bldg., W, 66604
(235-3451)
24 M 1902 54 ANES

Petrik, Edwin L., Memorial Hospital, 66607
(233-2361)
35 M 1902 64 IM

Pfuetze, Robert E., 209 Med. Arts Bldg., 66604
(232-9257)
09 M 1902 35 OBG

Pierce, Charles F., 918 W. 10th, 66604
(233-9681)
24 M 4101 51 OBG

Pierce, Donald R., 307 Med. Arts Bldg., 66604
(235-2226)
23 M 5101 49 FP

Porter, Robert D., 901 Garfield, 66606
(354-9591)
41 M 2802 67 IM

Powell, Benson M., 400 Continental Med. Bldg., 66606
(354-9504)
26 M 1606 49 TS

Powell, William R., 833 Garfield, 66606
(235-8707)
30 M 1902 54 GS

Powers, Harold W., 1710 W. 10th, 66604
(234-2624)
03 M 1803 27 OPH

Preston, Ralph R., 5025 Brentwood Rd., 66606
(234-2624)
19 M 1902 44 ENT

Prokop, Bradford S., 900 Washburn, 66606
(357-5173)
32 M 1606 57 OPH

Pusitz, Manuel E., 701 Grandview, 66606
(234-4943)
04 M 6501 29 OO

Pyle, Lucien R., 211 Med. Arts Bldg., 66604
(233-1304)
01 M 1601 28 OBG

Rabin, Erwin R., 105 Med. Arts Bldg., 66604
(234-8621)
30 M 2802 56 PATH

Rainbow, Kathryn A., 2916 Kentucky, 66605
21 F 4707 48 P

Raines, Omer M., 1710 W. 10th, 66604
(233-3611)
99 M 2802 25 GS

Ramsey, Bartlett W., 1001 Horne, 66604
(234-3465)
25 M 1902 50 PD

Ransdell, Edgar C., 8th & Lincoln, 66606
(235-5352)
41 M 3005 OBG

Ransom, James H., Med. Plaza Bldg., 66604
(234-2663)
36 M 1803 62 A

Rayburn, Frederick W., Santa Fe Hospital, 66607
(233-2364)
11 M 4113 37 IM

Reid, David W ., V.A. Hospital, 66604
(272-3111)
43 M 2501 69 Res(P)

Reinking, Victor E., 4408 Holly Lane, 66604
(233-9681)
26 M 1902 51 IM

Reymond, Ralph D., 310 Med. Arts Bldg., 66604
(234-3451)
37 M 2301 67 R

Riedel, Robert H., 6731 SW Aylesbury Rd., 66610
(478-4746)
04 M 2802 28 OO

Roberts, Howard E., 700 Harrison, 66603
(354-8461)
12 M 2105 40 ADM

Roberts, Warren E., 2123 Gage, 66614
(272-5797)
25 M 1902 57 FP

Roeder, Robert E., 420 Continental Med. Bldg., 66606
(357-6251)
40 M 1902 67 IM

Ross, Jack L., Menninger Foundation, Box 829, 66601
(234-9566)
32 M 4812 56 P

Roy, William R., 1561 Lakeside Dr., 66604
(273-0150)
26 M 1606 48 ADM

Rucker, Clemens, 1205 W. 29th, 66611
86 M 2822 05 OO

Runnels, John B., 901 Garfield, 66606
(357-6171)
35 M 1902 61 NS

Sanchez, Rogelio, 918 W. 10th, 66604
(233-9681)
31 M 64901 64 U

Sargent, Joseph, Menninger Foundation, Box 829, 66601
(234-9566)
32 M 2501 58 IM

Saylor, Edward H., 918 W. 10th, 66604
(233-9681)
39 M 1902 65 PD

Saylor, Leslie L., 918 W. 10th, 66604
(233-9681)
07 M 1606 35 GS

Scamman, W. Wike, 105 Med. Arts Bldg., W, 66604
(234-8621)
32 M 4705 57 PATH

Schloesser, Harvey L., 918 Merchants Natl. Bank, 66612
(235-3184)
21 M 3901 51 P

Segerson, John A., 901 Garfield, 66606
(357-6171)
18 M 3545 43 N

Sehdev, Harcharan S., Menninger Foundation, Box 829, 66601
(234-9566)
35 M 06101 63 P

Settle, Russell O., Jr., Menninger Foundation, Box 829, 66601
(234-9566)
35 M 1902 60 P

Settle, Russell O., Sr., 2320 Chelsea Dr., 66614
(272-8859)
04 M 1902 29 P

Sevier, Samuel M., 3113 College, 66611
(267-0633)
19 M 4812 44 IM

Shaw, Joseph L., 204 Med. Arts Bldg., 66604
(235-6221)
34 M 511 60 ORS

Sheafor, Douglas, 918 W. 10th, 66604
(233-9681)
34 M 1902 60 P

Sherwood, Clarence E., 400 Continental Med. Bldg., 66606
(354-9504)
22 M 702 53 GS

Shiney, Margaret L., 417 E. 6th, 66607
(233-2361)
26 F 1902 54 IM

Simpson, William S., Menninger Foundation, Box 829, 66601
(234-9566)
24 M 6001 48 P

Sisk, Phillip B., 310 Med. Arts Bldg., W, 66604
(234-3451)
32 M 1803 56 R

Smith, Leo A., 918 Buchanan, 66604
(357-0226)
08 M 3006 33 OO

Sodomsky, Martin E., 900 Washburn, 66604
(234-0156)
37 M 6201 61 P

Spearman, Jesse L., 24 Medical Arts Bldg., 66604
(234-2879)
20 M 1902 54 OBG

Spencer, Millard C., 310 Med. Arts Bldg., 66604
(234-3451)
28 M 1902 55 R

Spencer, Wayne E., 15 Med. Arts Bldg., E., 66604
(357-6209)
38 M 1902 64 GE

Stein, Joseph M., 901 Garfield, 66606
(357-6171)
24 M 3519 47 N

Stock, Karl W., 1701 W. 10th, 66604
(235-5205)
13 M 2834 37 OPH

Switzer, Robert E., Menninger Foundation, Box 829, 66601
(234-9566)
18 M 1720 42 CHP

Swogger, Glenn, Jr., 5000 Redbud Lane, 66606
(234-9566)
35 M 3806 60 P

Tappen, Daniel L., 8th & Lincoln, 66606
(233-5101)
16 M 1902 41 OBG

Targownik, Karl K., Reception-Diagnostic Cntr., Box 1558, 66601
(296-7281)
15 M 40710 49 P

Tarnower, William, Menninger Foundation, Box 829, 66601
(234-9566)
21 M 4802 48 P

Thurston, David E., 200 Continental Med. Bldg., 66606
(233-7491)
29 M 1902 55 ORS

Tozer, Richard C., 901 Garfield, 66606
(357-6171)
19 M 4102 45 NS

Travis, John W., 310 Med. Arts Bldg., W, 66604
(234-3451)
29 M 1606 55 TR

Trees, Clyde B., 200 Continental Med. Bldg., 66606
(233-7491)
09 M 2401 33 ORS

Treger, Newman V., 1704 W. 10th, 66604
(354-8761)
16 M 1902 40 IM

Triplett, William B., 10th & Mulvane, 66604
(233-5290)
23 M 2002 53 A

Uhr, Nathaniel, Menninger Foundation, Box 829, 66601
(234-9566)
00 M 3519 21 IM

VandeGarde, Larry D., 800 Lincoln, 66606
(233-5101)
41 M 1803 66 OBG

Viswanathan, Byravan, 417 E. 6th, 66607
(233-2361)
39 M 49534 62 HEM

Voth, Harold M., Menninger Foundation, Box 829, 66601
(234-9566)
22 M 1902 47 P

Walz, Royce C., 900 Washburn, 66606
(234-2676)
27 M 15407 60 P

Ward, Howard N., 901 Garfield, 66606
(354-9591)
37 M 1606 62 IM

Ware, Lucile M., Menninger Foundation, Box 829, 66601
(234-9566)
29 F 3501 53 CHP

Waxse, I. Joseph, 5132 Brentwood, 66606
(272-9066)
12 M 1902 39 FP

Weaver, Walter D., 900 Washburn, 66606
(357-5171)
41 M 1902 69 OPH

Weber, Darrell J., 1710 W. 10th, 66604
(233-2305)
16 M 1902 44 FP

Wiksten, Vernon C., 801 Terrace Ave., 66611
(233-6645)
11 M 1902 37 OO

Wilcox, Donald E., 122 Danbury Lane, 66606
(296-3782)
24 M 1902 55 PH

Williams, Howard V., State Office Bldg., 66612
(296-3471)
18 M 1205 43 P

Wilson, Marvin H., 38 Med. Arts Bldg., 66604
(234-0591)
38 M 1003 64 GS

Woods, Robert P., 901 Garfield, 66606
(357-6171)
14 M 6701 40 NS

Woollcott, Philip, Jr., Menninger Foundation, Box 829, 66601
(234-9566)
28 M 4102 54 P

Young, Theodore E., 107 Med. Arts Bldg., 66604
(232-0576)
22 M 2307 46 PD

Zee, Hugo J., Menninger Foundation, Box 829, 66601
(234-9566)
30 M 1902 58 P

Zimmerman, William H., 515 Mills Bldg., 66612
(232-4377)
20 M 3006 52 GS

TRIBUNE—316
(Southwest Kansas Society)

Werner, Willard F., 67879
(376-4251)
24 M 1902 52 FP

TROY—913
(Northeast Kansas Society)

Bascom, Charles H., 210 S. Main, 66087
(985-2211)
31 M 1902 56 FP

ULYSSES—316
(Southwest Kansas Society)

Brewer, Marshall A., 223 N. Main, 67880
(356-1261)
19 M 1902 46 FP

Dodson, William W., 207 N. Main, 67880
(356-3101)
24 M 1902 51 FP

Greenwood, James F., 223 N. Main, 67880
(356-1201)
33 M 1611 65 FP

Tillotson, Don R., 223 N. Main, 67880
(346-1201)
32 M 1902 65 FP

VALLEY CENTER—316
(Sedgwick County Society)

Daniels, Robert M., 130 Miles Ave., 67147
(755-0394)
24 M 1902 54 FP

WAKEENEY—913
(Central Kansas Society)

Berner, Neal E., 200 N. 6th, 67672
(743-2124)
44 M 1902 72 FP

Clark, David H., 200 N. 6th, 67672
(743-2124)
36 M 1902 62 FP

Hamilton, James J., 200 N. 6th, 67672
(743-2124)
30 M 1902 55 FP

WAMEGO—913
(Pottawatomie County Society)

Borgendale, Llewellyn V., 1601 Sunset, 66547
(456-2291)
29 M 1902 60 FP

Braden, Bill L., 507 Elm, 66547
(456-2291)
31 M 1902 60 FP

Clark, Laurence A., 227 Lincoln, 66547
(456-2291)
12 M 1902 42 FP

WASHINGTON—913
(Washington County Society)

Bitzer, Donald A., 115 W. 3rd, 66968
(325-2910)
03 M 3005 26 FP

Gomel, Ray G., 201 West 2nd, 66968
(325-2760)
99 M 1902 28 OO

WATHENA—913
(Northeast Kansas Society)

Peterson, Evan A., Jr., Box 98, 66090
(989-3122)
24 M 1803 55 FP

WELLINGTON—316
(Tri-County Society)

Cole, Ward M., 110 N. Jefferson, 67152
(326-7221)
08 M 1902 36 FP

Diacon, James L., 124 E. Lincoln, 67152
(326-2111)
24 M 3901 52 FP

Howell, J. Allen, 1005 S. Washington, 67152
(326-3321)
06 M 4804 31 GS

McCormick, Eugene C., Security State Bank Bldg., 67152
(326-3914)
31 M 1902 56 FP

McGovern, James L., 124 E. Lincoln, 67152
(326-2111)
22 M 3901 52 FP

Rose, Shelby D., St. Lukes Hospital, 67152
(326-7451)
40 M 2012 68 PATH

WESTMORELAND—913
(Pottawatomie County Society)

Dechairo, Thomas, 66549
(457)3311)
13 M 1902 36 FP

WICHITA—316
(Sedgwick County Society)

Acker, Stevens B., 3126 E. Central, 67214
(682-7561)
33 M 1902 58 FP

Adams, Austin J., 435 N. Roosevelt, 67208
(682-4812)
10 M 4804 36 OO

Agustin, Conrado M., 1035 N. Emporia, 67214
(267-3389)
38 M 74807 62 OBG

Ahlstrand, Richard A., 3333 E. Central, 67208
(685-1291)
41 M 3005 67 DR

Alfonso, Manuel, 3244 E. Douglas, 67208
(689-9445)
37 M 84710 66 ANES

Anderson, Eugene G., Sutton Place, 67202
(265-8619)
19 M 1902 44 OBG

Anderson, Harry O., 3244 E. Douglas, 67208
(689-9495)
08 M 1601 34 ORS

Angulo, Alberto E., 3244 E. Douglas, 67208
(689-9477)
39 M 26404 64 GE

Arthur, Arvin, 1035 N. Emporia, 67214
(262-3271)
42 M 1720 66 CD

Ashmore, Arthur L., 5025 E. Kellogg, 67218
(682-1534)
05 M 1902 32 TS

Aunins, John, 4853 Hemlock, 67216
(524-6805)
28 M 4706 56 FP

Bacon, Arthur H., 3244 E. Douglas, 67208
(689-9124)
13 M 3515 37 NS

Bailey, Donald C., 3333 E. Central, 67208
(685-1492)
37 M 3901 65 ORS

Barker, Benjamin W., 1148 S. Hillside, 67211
(683-4647)
18 M 1902 51 FP

Barnes, Marian, 211 S. Belmont, 67218
(684-2679)
97 F 2802 37 OO

Bartlett, Wayne C., 3244 E. Douglas, 67208
(689-9124)
07 M 1601 31 GS

Bauman, M. Leon, 1629 University, 67213
(265-7685)
01 M 1902 44 OO

Baumann, Paul A., 3333 E. Central, 67208
(685-1291)
32 M 5605 57 R

Beaver, James L., 959 N. Emporia, 67214
(263-3262)
09 M 2101 35 GS

Bebak, Donald M., 2322 E. Central, 67214
(263-6186)
32 M 3508 58 ANES

Behling, Helmut H., 925 N. Emporia, 67214
(265-1684)
38 M 4102 64 TR

Bethel, Chandler S., 5107 E. 21st, 67208
(682-6559)
34 M 1902 59 IM

Biermann, Henry J., 425 E. Murdock, 67214
(265-6287)
27 M 3006 52 GS

Biermann, William J., 1435 Lieunett, 67203
(265-0594)
04 M 3006 29 OO
Binyon, Kernie W., 4618 E. Central, 67208
(684-2819)
24 M 1902 56 FP
Blaylock, Hoyt C., 835 N. Hillside, 67214
(685-4395)
21 M 1902 45 D
Blood, Mary J., 647 N. Hillside, 67214
(682-4559)
13 F 1902 49 PD
Bloom, L. Theil, 3244 E. Douglas, 67208
(689-9422)
32 M 1902 57 R
Bowman, Harold S., 3333 E. Central, 67208
(682-6212)
04 M 2802 30 OO
Boyd, Zane R., 9717 Par Lane, 67212
(262-6211)
26 M 3005 52 FP
Braun, William T., III, 3333 E. Central, 67208
(685-1291)
37 M 2802 61 R
Brinton, Edward S., 959 N. Emporia, 67214
(262-3613)
15 M 1611 41 GS
Brito, Raul E., 851 N. Hillside, 67214
(685-1371)
32 M 31901 59 U
Brosius, Frank C., 3333 E. Central, 67208
(684-0251)
25 M 1902 49 CD
Brown, Alex L., 215 Patton, 67208
(267-1221)
15 M 3840 40 P
Brown, Robert L., 5025 E. Kellogg, 67218
(682-1534)
21 M 1902 49 FP
Brown, Val J., 1802 N. Hydraulic, 67214
(265-1137)
24 M 1003 47 FP
Browning, William H., 851 N. Hillside, 67214
(685-1371)
16 M 1902 43 U
Bubeck, Ralph W., 3244 E. Douglas, 67208
(689-9396)
36 M 1803 62 IM
Buck, Ben H., Jr., 5105 E. 21st, 67208
(684-2081)
17 M 2834 43 TS
Budetti, Joseph A., 427 N. Hillside, 67214
(686-6608)
11 M 3509 36 OTO
Burney, William W., 1755 N. Madison, 67214
(264-8311)
17 M 1902 52 FP
Burpee, James F., 851 N. Hillside, 67214
(685-1371)
39 M 5605 66 U
Butin, J. Walker, 3244 E. Douglas, 67208
(689-9477)
23 M 1902 47 GE

Caliendo, Daniel J., Jr., 550 N. Hillside, 67214
(685-2563)
41 M 1902 67 EM
Callahan, William P., Sr., 5051 E. Lincoln, 67218
(683-4534)
88 M 2820 10 OO
Capper, Stanley L., 3244 E. Douglas, 67208
(689-9206)
37 M 1803 67 D
Carreau, Ernest P., 5105 E. 21st, 67208
(682-0281)
17 M 1902 44 GS
Carter, Mack A., 3333 E. Central, 67208
(684-5158)
18 M 1902 50 OPH
Casey, John J., 3333 E. Central, 67208
(685-2377)
25 M 2604 57 NS
Cauble, Wilbur G., 1148 S. Hillside, 67211
(683-1681)
12 M 2834 39 GS
Cawley, Leo P., 550 N. Hillside, 67214
(685-2151)
22 M 3901 52 PATH
Chard, Frederick, 3244 E. Douglas, 67208
(689-9183)
15 M 5605 39 D
Clark, Courtney, 1128 S. Clifton, 67218
(684-7251)
30 M 1902 56 ANES
Clifton, H. David, 3400 Grand, 67218
(685-1111)
41 M 401 65 R
Coleman, John S., 3705 E. Douglas, 67218
(682-8891)
90 M 1611 22 OO
Coleman, Thomas J., 959 N. Emporia, 67214
(265-0749)
18 M 3545 51 IM
Concepcion, Eugenio S., Jr., 5105 E. 21st, 67208
(684-2081)
39 M 74802 64 TS
Cook, G. Edward, St. Joseph Hosp., 67218
(685-1111)
42 M 401 67 R
Corrigan, George F., 711 Stackman Drive, 67203
(267-9185)
95 M 3006 20 OO
Cossman, F. Price, 851 N. Hillside, 67214
(685-1371)
28 M 1902 57 U
Cowles, George E., 47 Mission Rd., 66206
(683-0317)
96 M 1902 21 OO
Cowles, Gordon T., 3333 E. Central, 67208
(683-2661)
32 M 1902 58 OBG
Cronin, Donald J., 3244 E. Douglas, 67208
(689-9227)
16 M 2604 40 ENT
Crow, Ernest W., 3333 E. Central, 67208
(684-0251)
20 M 1902 44 CD

Crowley, Edward X., 345 N. Hillside, 67214 (682-4519)
14 M 1643 39 GYN
Cummings, Richard J., 427 N. Hillside, 67214 (686-6608)
32 M 1902 57 OTO
Davenport, S. Scott, 959 N. Emporia, 67214 (222-3613)
30 M 401 61 N
Davidson, Harry T., 105 N. Market, 67202 (264-0361)
87 M 3802 11 FP
DeBakker, Jan B., 1035 N. Emporia, 67214 (263-4903)
25 M 5104 59 GS
DeHaan, Charles, Jr., 4133 E. Kellogg, 67218 (685-7221)
22 M 512 52 FP
DeJong, David C., 929 N. St. Francis, 67214 (262-6211)
33 M 2501 59 PATH
Donnell, James M., 1131 S. Clifton, 67218 (685-4354)
28 M 1902 55 FP
Drake, Ralph L., 4422 E. 3rd, 67208 (682-8880)
99 M 4102 26 OO
Drevets, Curtis C., 3244 E. Douglas, 67208 (689-9178)
30 M 1902 56 IM
Durano, Antonio C., Jr., 959 N. Emporia, 67214 (263-7893)
29 M 74807 56 U
Dyck, Cora E., 702 Waverly, 67218 (686-9184)
00 F 1902 26 ANES
Dyck, George, WSU Branch, K.U.M.C., 67219 (689-3528)
37 M 5201 64 P
Ebbesson, Berno S. E., 929 N. St. Francis, 67214 (262-6211)
41 M 1902 70 RES (GS)
Eckert, William G., 929 N. St. Francis, 67214 (262-6211)
26 M 3519 52 PATH
Edwards, Manis C., 3333 E. Central, 67208 (683-2661)
33 M 3005 58 OBG
Ellis, Harvey D., 6611 E. Central, 67206 (683-1022)
24 M 1902 55 GS
Elnen, Walter T., 460 N. Terrace Dr., 67208 (682-5671)
03 M 1643 32 GS
Emery, Frank A., 10 St. James Place, 67206 (683-0217)
05 M 2802 29 OO
Erken, Ronald V., 3101 E. 9th, 67214 (684-0201)
29 M 2834 56 P
Evans, Farris D., 821 N. Hillside, 67214 (684-6642)
05 M 1902 32 FP
Evans, Grant E., 3333 E. Central, 67208 (682-6556)
21 M 4901 46 OBG
Farha, George J., 905 N. Emporia, 67214 (263-0296)
27 M 2101 57 GS
Farha, S. Jim, 905 N. Emporia, 67214 (263-0296)
31 M 1001 57 TS
Fender, Thomas H., Jr., 3201 E. 2nd, 67208 (682-1886)
25 M 4812 54 NP
Ferrell, Donald P., 1125 S. Clifton, 67218 (685-2371)
36 M 3901 63 FP
Fieldman, E. Jay, 2322 E. Central, 67214 (263-6186)
26 M 3508 51 ANES
Finley, Dennis R., 1035 N. Emporia, 67214 (262-7429)
36 M 1606 62 ORS
Firkins, Richard T., 3244 E. Douglas, 67208 (689-9227)
31 M 1803 56 ENT
Fisher, James B., 3244 E. Douglas, 67208 (689-9477)
09 M 1902 36 IM
Fitzgerald, Edward J., 3400 Grand, 67218 (685-1111)
22 M 3006 50 R
Flowers, Clell B., Jr., 855 N. Hillside, 67214 (682-1381)
22 M 1902 55 FP
Ford, Charles R., 1301 N. West St., 67203 (942-4279)
38 M 1902 63 OPH
Fowler, Robert J., 3244 E. Douglas, 67208 (689-9236)
37 M 2802 63 IM
Francis, Norton L., 5205 E. 21st, 67208 (684-2838)
10 M 3005 35 OTO
Fritz, George E., 550 N. Hillside, 67214 (685-2151)
18 M 2507 43 PATH
Fritzemeier, William H., 835 N. Hillside, 67214 (685-4395)
14 M 1902 41 D
Fromm, Arthur H., 315 N. Hillside, 67214 (685-2281)
37 M 1902 63 FP
Fulton, John K., 3333 E. Central, 67208 (686-0732)
18 M 5605 43 IM
Gabatin, Joe, 120 N. Oliver, 67208 (683-3841)
30 M 74801 55 P
Galvan, Alonso, 3333 E. Central, 67208 (684-0251)
38 M 64906 64 GE
Garfinkel, Lester S., 3333 E. Central, 67208 (684-5213)
35 M 2802 59 IM

George, Earl F., 406 E. Central, 67202
(265-6991)
35 M 1902 65 FP

George, M. Don, Wichita State University, KUMC Branch, 67219
(689-3144)
31 M 1001 56 P

Gessler, Donald J., 1122 N. Topeka, 67214
(684-3881)
41 M 1902 69 FP

Goering, Robert C., St. Joseph Hospital, 67218
(685-1111)
25 M 64901 56 PATH

Goldberg, Herbert R., 400 N. Woodlawn, 67208
(685-4215)
33 M 3508 59 PD

Gonzalez, Hiram, 3333 E. Central, 67208
(686-1221)
20 M 64901 52 P

Gouldner, René M., 139 Courtleigh, 67218
(683-3282)
88 M 3501 18 OO

Grauel, Charles W., 820 N. Dellrose, 67208
(262-1127)
44 M 1902 70 ANES

Grauel, Truman W., 3333 E. Central, 67208
(682-6511)
41 M 5605 66 OBG

Graves, Jack W., 3244 E. Douglas, 67208
(689-9398)
17 M 1902 42 GS

Gray, C. Lucien, 4821 E. Central, 67208
(684-5171)
21 M 1902 45 ENT

Gray, H. Thomas, 3244 E. Douglas, 67208
(689-9152)
19 M 401 44 D

Gribble, Robert N., 929 N. St. Francis, 67211
(262-6211)
43 M 1902 69 R

Grillot, Floyd B., 814 S. Woodlawn, 67218
(684-0243)
18 M 1902 51 FP

Grushnys, Arnold A., 3244 E. Douglas, 67208
(689-9445)
19 M 40721 59 ANES

Gsell, George F., 3244 E. Douglas, 67208
(689-9316)
07 M 1601 33 OPH

Guthrie, Richard A., WSU Branch, KUMC, 67219
(689-3097)
35 M 2803 60 PD

Hagan, C. Thomas, 959 N. Emporia, 67214
(265-0789)
16 M 3006 42 IM

Hagan, Francis J., 1250 Maple, 67213
(262-1057)
13 M 3006 39 FP

Hale, Ralph, 847 S. Hillside, 67211
(684-0295)
18 M 1902 46 A

Halpin, Edward D., 1148 S. Hillside, 67211
(685-9229)
33 M 1902 62 OBG

Harms, Edwin M., 609 N. Broadway, 67214
(262-8476)
06 M 3901 34 OPH

Harris, Frank H., 1035 N. Emporia, 67214
(267-1221)
09 M 1001 39 NP

Harrison, A. Brooks, 3333 E. Central, 67208
(682-2314)
99 M 1902 25 D

Hart, Dillis L., 5105 E. 21st, 67208
(684-2081)
36 M 3901 64 TS

Hartley, Fount K., 1148 S. Hillside, 67211
(683-6506)
25 M 1902 53 GS

Harvey, Rosemary B., 2230 Cardinal Dr., 67204
(838-1796)
24 F 1902 49 PH

Hattrup, Richard J., 1131 S. Clifton, 67218
(685-4354)
31 M 3006 57 FP

Hayes, William L., 3333 E. Central, 67208
(684-0251)
28 M 1902 53 CD

Henning, Charles E., 315 N. Hillside, 67214
(682-3221)
37 M 1902 63 ORS

Hensley, Cline D., Jr., 3244 E. Douglas, 67208
(689-9272)
20 M 1902 44 ORS

Hershorn, Simon E., 3333 E. Central, 67208
(685-1291)
22 M 1902 46 R

Hidaka, Harry T., 2125 Maple, 67213
(943-1257)
21 M 5606 49 FP

Hiebert, Abraham E., 3306 E. Central, 67208
(682-6568)
94 M 2802 25 PS

Hinshaw, Alfred H., 6110 Oneida, 67208
(685-3974)
07 M 1902 33 ADM

Hinshaw, Charles T., 357 N. Hillside, 67214
(682-8651)
99 M 4705 26 PD

Hiratzka, Tomiharu, 550 N. Hillside, 67214
(685-2151)
13 M 511 43 PATH

Hodson, Hervey R., 1122 S. Clifton, 67218
(682-5012)
03 M 1606 31 GS

Holden, Raymond F., 3333 E. Central, 67208
(683-1932)
10 M 2802 33 IM

Holladay, Harmon M., 400 N. Woodlawn, 67208
(686-9184)
23 M 1902 52 ANES

Horbelt, Douglas V., Wesley Medical Center, 67214
(685-2151)
47 M 4802 72 Res (OBG)

Howard, Donald O., 959 N. Emporia, 67214
(265-7241)
11 M 1902 38 OPH
Hubler, David L., 929 N. St. Francis, 67214
(262-6211)
47 M 4802 73 RES(OBG)
Huebert, Dean A., 5025 E. Kellogg, 67218
(682-1534)
22 M 1902 46 FP
Hull, Kenneth L., 3101 E. 9th, 67214
(648-0201)
38 M 2301 69 P
Hultgren, Myron K., 855 N. Hillside, 67214
(685-1381)
41 M 1902 68 FP
Hume, Joseph W., 3333 E. Central, 67208
(682-6511)
38 M 1902 69 OBG
Hummer, Lloyd M., 3244 E. Douglas, 67208
(689-9323)
32 M 3901 57 IM
Hurst, Thomas C., 959 N. Emporia, 67214
(264-3543)
14 M 1902 38 PD
Hustead, Robert F., 2401 N. Pershing, 67220
(685-4389)
28 M 801 54 ANES
Hyde, Marshall E., 927 S. Water, Apt. 2, 67213
(687-3511)
07 M 1902 33 IM
Hyndman, H. Harold, 400 N. Woodlawn, 67208
(686-9184)
10 M 1902 36 ANES
Hynes, Henry E., 1035 N. Emporia, 67214
(262-3362)
35 M 53902 58 IM
Ibarra, J. Luis, 3333 E. Central, 67208
(686-1221)
20 M 64901 46 P
Jackson, Charles R., 1035 N. Emporia, 67214
(263-0812)
27 M 1606 53 GS
Jager, Thor J., 235 N. Belmont, 67208
(682-3704)
82 M 1606 07 OO
Jehan, Sayed S., 1801 E. 10th, 67214
(268-8251)
33 M 70403 59 P
Jenney, Charles B., 905 N. Emporia, 67214
(263-0296)
34 M 2834 61 GS
Jones, Clifford E., 2725 Boulevard Plaza, 67211
(684-6546)
22 M 1902 50 FP
Kaelson, Paul A., Jr., 2012 W. 13th, 67203
(943-8671)
17 M 1902 50 FP
Kardatzke, E. Stanley, 1301 N. West, 67203
(943-9342)
39 M 1720 64 FP
Kardatzke, Jon K., 1301 N. West, 67203
(942-3271)
36 M 1720 62 FP
Kasha, Robert L., 1442 N. Oliver, 67208
(684-0181)
11 M 2834 38 GS
Kaufman, Eugene E., 3333 E. Central, 67208
(685-1491)
30 M 1902 56 ORS
Keene, George H., 5025 E. Kellogg, 67218
(682-1534)
20 M 1902 49 GS
Kenny, M. Gary, 841 N. Broadway, 67214
(263-6131)
36 M 1902 66 FP
Kendall, Tom E., 925 N. Emporia, 67214
(262-3495)
37 M 3901 62 PS
Kendrick, J. Gilleran, 3333 E. Central, 67208
(682-6511)
20 M 1902 46 OBG
Kennedy, Gerald T., 2916 E. Central, 67214
(684-5243)
35 M 1902 61 GE
Khicha, Gyanchand J., 905 N. Emporia, 67214
(263-0296)
37 M 49530 61 TS
Kirk, Earl D., Jr., 345 N. Hillside, 67214
(685-1351)
34 M 1902 62 IM
Kiser, John L., 3333 E. Central, 67208
(685-1491)
37 M 2802 62 GS
Kiser, Willard J., 3333 E. Central, 67208
(685-1491)
05 M 4705 30 GS
Kitchen, Robert R., 3420 E. Douglas, 67208
(685-2355)
26 M 1902 52 CHP
Knapp, Leslie E., 302 S. Crestway, 67218
(682-5792)
96 M 1902 25 GS
Knapp, M. Robert, 1128 S. Clifton, 67218
(684-7251)
23 M 3519 47 ANES
Knappenberger, Roy C., 3244 E. Douglas, 67208
(689-9327)
16 M 1902 41 PD
Kneidel, Thomas W., 925 N. Emporia, 67214
(262-3476)
40 M 4101 66 ORS
Kouri, Sammy H., 3333 E. Central, 67208
(682-2911)
33 M 3901 57 GS
Krause, Roland L., 855 N. Hillside, 67214
(685-1381)
25 M 1902 53 IM
Kurth, C. Joseph, 925 N. Emporia, 67214
(263-6177)
10 M 3006 35 NP
Kutilek, Frank J., 8937 W. Central, 67212
(722-4258)
30 M 1902 57 FP
Laham, Alexander J., 2723 Boulevard Plaza, 67211
(683-4658)
20 M 1902 44 IM

Lance, John F., Jr., 3244 E. Douglas, 67208
(689-9438)
20 M 1902 45 ORS
Lawn, Raymond A., 715 N. Mission Rd., 67206
(683-8991)
09 M 2604 35 AM
Lazar, Harry, 611 N. Hillside, 67214
(684-0501)
08 M 1611 35 A
Lee, Edward S., Jr., 2002 E. 17th, 67214
(264-8273)
09 M 4707 37 FP
Lee, R. Rex, 6155 E. Harry, 67218
(685-2306)
29 M 3901 55 FP
Lindley, Milton E., 1148 S. Hillside, 67211
(684-0284)
14 M 1902 50 FP
Linhardt, Ronald D., 3333 E. Central, 67208
(682-6511)
36 M 2803 64 OBG
Little, L. Gilbert, 502 Brown Bldg., 67202
(263-7614)
99 M 401 27 P
Lockhart, Joseph G., 5900 E. Central, 67208
(684-7239)
17 M 4113 43 PD
Loeffler, James A., 400 N. Woodlawn, 67208
(685-5375)
36 M 3841 63 A
Loewen, Henry H., 2142 W. 17th, 67203
(943-0993)
03 M 1902 35 FP
Loewen, William C., 1301 N. West, 67203
(943-3253)
41 M 1902 71 FP
Logan, Geoffrey G., 345 N. Hillside, 67214
(682-7539)
31 M 14303 56 OBG
Lovett, Paul A., 902 N. Hillside, 67214
(683-6683)
09 M 1902 45 ORS
Low, Harold L., 1148 S. Hillside, 67211
(684-2858)
18 M 1902 44 FP
Lueken, Lueke B., 3244 E. Douglas, 67208
(689-9234)
23 M 40723 52 OBG
Luellen, Thomas J., 3244 E. Douglas, 67208
(689-9244)
17 M 1902 41 IM
Luzzati, Enzo F., 929 N. St. Francis, 67214
(262-6211)
25 M 56119 50 R
MacLeod, Sherburne, 841 N. Broadway, 67214
(263-6131)
06 M 3901 33 FP
Madison, Ward N., Jr., 3400 Grand, 67218
(686-9432)
37 M 3601 62 PATH
Marsh, Harry H., III, Wesley Med. Center, 67214
(685-2151)
30 M 6701 55 PATH
Marsh, Henry O., 925 N. Emporia, 67214
(262-3476)
18 M 1611 43 ORS
Martin, Glen E., 2322 E. Central, 67214
(263-6186)
20 M 1902 49 ANES
Marymont, Jesse H., Wesley Med. Center, 67214
(685-2151)
28 M 3515 54 PATH
Mastio, George J., 3333 E. Central, 67208
(684-5235)
25 M 1902 52 GS
Matassarin, Benjamin M., 2916 E. Central, 67214
(684-5243)
20 M 1902 45 IM
Matassarin, Frederick W., 734 N. Emporia, 67214
(265-2382)
15 M 1902 37 U
McClanahan, Ward A., 5105 E. 21st, 67208
(684-8211)
22 M 3005 48 ORS
McClellan, Ernest L., 400 N. Woodlawn, 67208
(686-9184)
38 M 4802 70 ANES
McCoy, Charles P., 3333 E. Central, 67208
(682-6511)
17 M 3006 42 OBG
McGuire, William F., 3333 E. Central, 67208
(683-5655)
17 M 4101 43 PD
McKee, Michael B., 3244 E. Douglas, 67208
(689-9314)
43 M 3520 69 CD
Meeker, Bruce P., II, 345 N. Hillside, 67214
(682-7539)
30 M 1902 58 OBG
Menaker, Jerome S., 2703 E. Central, 67214
(685-1277)
16 M 1002 41 OBG
Menehan, H. James, 3244 E. Douglas, 67208
(689-9404)
26 M 1902 53 PD
Meredith, W. Tom, 1035 N. Emporia, 67214
(263-7285)
35 M 4812 61 IM
Mershon, James C., 1035 N. Emporia, 67214
(263-3271)
37 M 1803 63 CD
Meulbroek, Harvey J., 3244 E. Douglas, 67208
(689-9156)
31 M 5605 56 A
Meyer, Warren E., 3333 E. Central, 67208
(684-5237)
27 M 1606 51 GS
Michelbach, Albert P., 2916 E. Central, 67214
(684-5243)
35 M 2101 61 CD
Milbank, George E., 959 N. Emporia, 67214
(262-2529)
97 M 4101 22 FP
Miles, Anthony W., 3333 E. Central, 67208
(682-4563)
11 M 1720 34 U

Miles, Robert W., 841 N. Broadway, 67214
(263-6131)
45 M 3901 72 FP
Miller, Clyde W., 315 N. Hillside, 67214
(685-2263)
09 M 2002 36 FP
Miller, Don E., 4145 E. Kellogg, 67218
(682-0621)
20 M 2802 44 GS
Mills, Charles D., 1144 S. Water, 67213
(263-6824)
89 M 2002 14 FP
Mirza, Medo, 3333 E. Central, 67208
(686-6683)
38 M 40733 64 PDS
Moore, Dennis F., 959 N. Emporia, 67214
(267-6944)
36 M 2101 62 HEM
Moreland, Donald G., 1301 N. West St., 67203
(943-3253)
36 M 1902 63 FP
Morgan, James I., 3124 S. Seneca, 67217
(522-2266)
29 M 1606 53 FP
Morgan, Louis S., 8030 E. Kellogg, 67207
(683-3811)
22 M 3901 48 FP
Morris, Robert E., 2824 S. Osage, #201, 67217
(685-2151)
46 M 3005 71 RES(R)
Morrison, Richard L., 1148 S. Hillside, 67211
(683-6506)
42 M 1902 67 FP
Morrow, Thomas F., 3310 E. Douglas, 67208
(685-1443)
21 M 5606 46 P
Moseley, Jack E., 1120 S. Clifton, 67218
(682-4982)
25 M 3901 53 FP
Mosier, Stanley J., 1001 N. Minneapolis, 67214
(265-9585)
42 M 1902 68 FP
Moy, James T., 3028 E. 2nd, 67214
(682-1392)
14 M 4102 40 IM
Mueller, Vernette A., 3015 E. Central, 67214
(684-3981)
17 M 2802 41 OBG
Murphy, Duane A., 3333 E. Central, 67208
(685-1491)
32 M 1902 65 ORS
Murphy, Paul M., 3400 Grand, 67218
(685-1111)
28 M 3006 51 R
Nelson, Gerald D., 925 N. Emporia, 67214
(262-3495)
34 M 1902 60 PS
Nelson, Russell A., 3333 E. Central, 67208
(682-5523)
18 M 1902 45 PD
Newby, James P., 905 N. Emporia, 67214
(263-0296)
34 M 1902 59 TS
Newsom, F. Carter, 3310 E. Douglas, 67208
(685-1443)
18 M 1201 43 P
Nixon, William A., 3333 E. Central, 67208
(683-6622)
16 M 1902 44 GS
Norris, Robert P., 3244 E. Douglas, 67208
(689-9232)
17 M 1902 43 IM
North, Doris G., 1148 S. Hillside, 67211
(684-5257)
16 F 1902 47 FP
North, Victor, 1148 S. Hillside, 67211
(684-5257)
18 M 1902 47 FP
Norton, Robert K., 3244 E. Douglas, 67208
(689-9235)
32 M 1001 57 PD
Nyberg, Fredrik F., 439 Windsor, 67218
(682-0489)
22 M 2101 46 GYN
O'Donnell, Leonard A., Jr., 8033 E. Douglas, 67207
(684-2835)
27 M 1902 55 CD
O'Donnell, Leonard A., 8033 E. Douglas, 67207
(684-2781)
03 M 5606 25 IM
Osborne, Conrad C., 855 N. Hillside, 67214
(685-1381)
38 M 1902 67 FP
Osio, Antonio L., 1125 S. Clifton, 67218
(685-2371)
41 M 26404 65 FP
Osoba, William G., 2525 W. 13th, 67203
(943-9391)
25 M 2802 51 FP
Owen, LaRue W., 1128 S. Clifton, 67218
(684-7251)
19 M 1902 50 ANES
Owen, Pere A., 1128 S. Clifton, 67218
(684-7251)
37 M 1902 64 ANES
Oxley, Dwight K., 550 N. Hillside, 67214
(686-7161)
36 M 1902 62 NM
Padgett, William L., 841 S. Hillside, 67211
(683-7503)
24 M 1902 51 FP
Page, Ruth, 1148 S. Hillside, 67211
(684-0255)
13 F 1902 43 IM
Palmer, David L., 911 N. Hillside, 67214
(686-7161)
37 M 1902 63 PATH
Parker, Harold L., 925 N. Emporia, 67214
(263-3765)
32 M 1902 67 FP
Parmley, Charles C., 5025 E. Kellogg, 67218
(682-1534)
18 M 1902 44 GS
Pennington, Katherine, 3333 E. Central, 67208
(682-5432)
16 F 1902 43 PD

Peters, Dale W., 400 N. Woodlawn, 67208
(684-5217)
21 M 1902 45 P
Petterson, O'Ruth S., 5205 E. 21st, 67208
(682-1579)
19 F 1902 44 FP
Phipps, Jack G., 315 N. Hillside, 67214
(685-2263)
21 M 1902 53 FP
Pinsker, Jacob A., 1035 N. Emporia, 67214
(267-8259)
06 M 1902 35 IM
Podrebarac, Leonard F., 425 E. Murdock, 67214
(265-6287)
24 M 3006 53 FP
Poling, Terry L., 6155 E. Harry, 67218
(685-2306)
36 M 1902 62 FP
Poole, Bernard T., 1035 N. Emporia, 67214
(264-2806)
37 M 53902 62 ORS
Porter, Garry L., 507 W. Volutsia, 67214
(686-7351)
35 M 1606 61 P
Powers, Kenneth D., 2703 E. Central, 67214
(685-1277)
23 M 1902 47 OBG
Pullman, Norman K., 3007 E. Central, 67214
(686-7369)
21 M 3006 45 PS
Purinton, Lew W., 345 N. Hillside, 67214
(685-1301)
23 M 1902 48 IM
Purves, Robert K., 3333 E. Central, 67208
(686-1991)
18 M 1606 43 GS
Putnam, Lyle B., 959 N. Emporia, 67214
(262-5037)
11 M 1902 36 FP
Radovanov, Radmila, 337 Rutland Rd., 67206
(283-1160)
34 F 95702 60 R
Rawcliffe, Robert A., Jr., 925 N. Emporia, 67214
(262-3476)
29 M 3501 55 ORS
Reals, William J., 3400 E. Grand, 67218
(686-9432)
20 M 3006 45 PATH
Reazin, Walter L., 855 N. Hillside, 67214
(685-1381)
30 M 1902 58 FP
Reed, A. J., 1125 S. Clifton, 67218
(685-2371)
40 M 3901 65 FP
Reed, D. Cramer, WSU Branch, KUMC, 67219
(689-3144)
15 M 2802 41 ADM
Reeves, Bradford F., 3333 E. Central, 67208
(685-1291)
37 M 4812 62 R
Reinhardt-Wulf, Taissia, 611 N. Hillside, 67214
(684-0501)
19 F 91302 42 A
Relihan, Donald A., 3333 E. Central, 67208
(684-5158)
27 M 1902 54 OPH
Rempel, John H., 3333 E. Central, 67208
(685-1812)
38 M 3901 62 PS
Rhoads, James P., 3244 E. Douglas, 67208
(689-9163)
34 M 3520 60 IM
Rhoden, Curtis H., 3333 E. Central, 67208
(684-0252)
33 M 1803 59 IM
Rhodes, Ivan E., 3333 E. Central, 67208
(685-1291)
25 M 3901 49 R
Rhodes, Lowell M., 315 N. Hillside, 67214
(685-1461)
25 M 1902 53 FP
Richardson, Stewart F., 3420 E. Douglas, 67208
(685-2321)
28 M 3005 54 P
Rieger, Ernest H., 3333 E. Central, 67208
(682-4591)
29 M 1902 46 TS
Riordan, Hugh D., 434 N. Oliver, 67208
(682-9241)
32 M 5605 57 P
Roberts, Daniel K., 3333 E. Central, 67208
(682-6511)
36 M 3005 61 OBG
Roberts, Louis S., 115 S. Rutan, 67218
(686-1104)
95 M 2834 20 OO
Robertson, Joseph K., 905 N. Emporia, 67214
(263-0296)
41 M 3901 66 GS
Robinson, G. Donald, 3333 E. Central, 67208
(686-6659)
28 M 1902 54 PD
Robinson, John E., 507 N. Volutsia, 67214
(686-7351)
32 M 6201 50 P
Robinson, Robert H., 3244 E. Douglas, 67208
(689-9445)
20 M 1902 53 ANES
Romalis, Brian E., 507 N. Volutsia, 67214
(686-7351)
39 M 6201 63 P
Rosenberg, Thomas F., 611 N. Hillside 67214
(684-0501)
41 M 1642 68 A
Russell, Philip W., 3244 E. Douglas, 67208
(689-9351)
22 M 1902 44 IM
Sabin, George M. Jr., 321 N. Topeka, 67202
(265-6601)
12 M 5002 39 ADM
Santoscoy, Gilbert S., 3244 E. Douglas, 67208
(689-9124)
38 M 4812 62 S
Schiltz, Frances H., 15 Willow Brook, 67207
(683-4978)
93 F 6701 23 IM

Schlachter, Ernest R., 406 E. Central, 67202 (265-0705)
24 M 1902 52 FP

Schlicher, John E., 3244 E. Douglas, 67208 (689-9346)
40 M 1803 66 D

Schlueter, John J., 3333 E. Central, 67208 (685-9289)
31 M 3841 56 R

Schopf, Clifton C., 925 N. Emporia, 67214 (262-3765)
29 M 1902 57 FP

Schwartz, V. Dean, 400 N. Woodlawn, 67208 (684-3881)
24 M 1902 48 FP

Scott, Vincent L., 3333 E. Central, 67208 (685-1265)
03 M 3806 29 PD

Shafer, Preston J., 3333 E. Central, 67208 (682-6511)
20 M 3005 46 OBG

Shaw, James W., 150 S. Battin, 67218 (683-0531)
98 M 1601 27 OO

Shellito, John G., 3244 E. Douglas, 67208 (689-9124)
18 M 1606 43 TS

Shiflet, Albert W., 841 N. Broadway, 67214 (263-6131)
06 M 3901 33 ORS

Shrader, Doyle A., 3333 E. Central, 67208 (682-4851)
16 M 1902 41 EENT

Siegel, Albert R., St. Joseph Hospital, 67218 (685-1111)
22 M 1642 47 PM

Sifford, R. Lawrence, 959 N. Emporia, 67214 (265-0561)
25 M 1803 52 IM

Silverman, Mervyn F., 1900 E. 9th, 67214 (268-8391)
38 M 2101 64 GPM

Sleeper, Carol A., 8 Stagecoach Rd., 67230 (689-9225)
33 F 1902 58 PATH

Sleeper, Donald C., 8 Stagecoach Rd., 67230 (733-0441)
32 M 1902 58 R

Smith, Alvin L., St. Francis Hospital, 67214 (262-6211)
28 M 5606 57 PATH

Smith, Erma A., 120 N. Kansas, 67214 (265-8055)
95 F 1601 33 PM

Smith, Willard J., Jr., 851 N. Hillside, 67214 (685-1371)
32 M 1611 57 U

Snyder, Gregg M., 3333 E. Central, 67208 (685-2377)
27 M 1803 54 NS

Solomon, Herman, 835 N. Hillside, 67214 (685-4395)
37 M 2701 62 D

Somers, Marvin M., 929 N. St. Francis, 67214 (262-6211)
23 M 1902 48 R

Spann, Richard W., 3333 E. Central, 67208 (684-0252)
40 M 1902 65 PUD

Stanley, Kenneth E., 3244 E. Douglas, 67208 (689-9185)
31 M 1902 56 U

Stark, James R., 3244 E. Douglas, 67208 (689-9422)
20 M 1902 44 R

Stewart, Jack T., 4815 E. Central, 67208 (683-8401)
30 M 2802 57 IM

Stofer, Bert E., Wesley Med. Center, 67214 (685-2151)
06 M 1902 33 PATH

Stolz, Elmer G., 425 E. Murdock, 67214 (265-6287)
17 M 3006 45 FP

Street, David E., 905 N. Emporia, 67214 (263-0296)
35 M 2101 61 GS

Sullivan, Leonard L., 3244 E. Douglas, 67208 (689-9454)
35 M 1902 61 PD

Swisher, William C., 5025 E. Kellogg, 67218 (682-1534)
21 M 1902 47 OBG

Taylor, Richard J., 929 N. St. Francis, 67214 (262-1952)
21 M 3006 49 PATH

Thelen, Christine, 212 Bitting Bldg., 67202 (267-3936)
13 F 5104 37 OBG

Thompson, Daniel M., 118 E. 21st, 67214 (838-3381)
19 M 1902 50 FP

Throckmorton, Marion A., 2014 W. 13th, 67203 (943-1216)
23 M 1902 47 FP

Tihen, Edward N., 3244 E. Douglas, 67208 (689-9232)
24 M 1606 48 IM

Tihen, Henry N., 3244 E. Douglas, 67208 (689-9169)
96 M 1601 19 IM

Tiller, George R., 5101 E. Kellogg, 67218 (684-5255)
41 M 1902 67 AM

Tilton, Frank M., 3244 E. Douglas, 67208 (689-9137)
33 M 2002 59 N

Tinker, Robert C., 1126 S. Clifton, 67218 (682-7578)
31 M 2834 57 ORS

Tinterow, Maurice M., 3333 E. Central, 67208
(685-4389)
17 M 4802 41 ANES

Tippin, Ernest E., Jr., 959 N. Emporia, 67214
(265-5256)
24 M 1902 50 ENT

Tocker, Alfred M., 1035 N. Emporia, 67214
(265-2613)
15 M 4802 40 TS

Tocker, Lilia Rodriguez, 1035 N. Emporia, 67214
(265-2613)
21 F 27501 49 IM

Tonn, Gerhart R., 855 N. Hillside, 67214
(685-1381)
16 M 1902 44 FP

Tracy, Terry A., 3333 E. Central, 67208
(686-7301)
35 M 2803 61 OBG

Trees, Donald P., 1148 S. Hillside, 67211
(684-7082)
14 M 4101 39 IM

Tretbar, Harvey A., 3333 E. Central, 67208
(684-0251)
25 M 1902 52 IM

Uhlig, Paul J., 3244 E. Douglas, 67208
(689-9191)
28 M 1902 57 PD

VinZant, Larry E., 3333 E. Central, 67208
(682-6532)
10 M 1902 40 NS

Vorhees, Victor J., 1001 N. Minneapolis, 67214
(265-9581)
36 M 1902 68 FP

Voth, Douglas W., WSU Branch, KUMC, 67219
(689-3193)
34 M 1902 59 IM

Wallace, Robert W., 1128 S. Clifton, 67218
(684-7251)
28 M 3006 53 ANES

Warren, John W., Jr., 3244 E. Douglas, 67208
(689-9239)
15 M 2501 39 U

Warren, Lloyd P., 5205 E. 21st, 67208
(683-7223)
11 M 1902 36 OPH

Warren, Wirt A., 352 N. Broadway, 67202
(267-5031)
09 M 2802 33 GER

Weaver, Jack D., 959 N. Emporia, 67214
(265-7241)
16 M 2802 42 OPH

Weaver, J. Robert, 959 N. Emporia, 67214
(265-5731)
21 M 1902 48 FP

Wedin, Paul H., 2721 Blvd. Plaza, 67211
(686-6769)
08 M 1902 38 TS

Wehmeyer, Donald L., Wesley Medical Center, 67214
(685-2151)
45 M 2803 71 RES(GS)

Weippert, Edward J., 1301 N. West, 67203
(943-3271)
44 M 1902 70 FP

Welch, Lauren K., 3333 E. Central, 67208
(685-2377)
35 M 1902 61 N

Wellshear, Charles C., 3101 E. 9th, 67214
(684-0201)
30 M 4706 58 P

Weninger, John H., 1148 S. Hillside, 67211
(682-6523)
32 M 3005 62 FP

West, Ray A., 83 Mission Rd. 67207
(684-1130)
92 M 1601 19 OO

West, William T., 3244 E. Douglas, 67208
(689-9234)
24 M 1902 49 OBG

Whallon, Jacob T., 445 N. Dellrose, 67208
(683-3407)
14 M 1720 41 IM

Wheeler, Pickney R., 2208 W. 13th, 67203
(943-2118)
18 M 3901 56 FP

White, Charles M., 3244 E. Douglas, 67208
(689-9422)
15 M 3005 41 R

Wilchins, Lawrence J., 9235 W. Central, 67212
(722-1129)
24 M 3607 47 GS

Wiant, Max K., Jr., 3319 E. Elm, 67208
(682-4748)
41 M 4112 72 RES(FP)

Wilder, Lowell W., 3333 E. Central, 67208
(684-5158)
35 M 4109 62 OPH

Williams, Charles L., 3244 E. Douglas, 67208
(689-9269)
16 M 2834 43 IM

Wilson, Robert L., 522 N. Rutan, 67208
(685-2334)
30 M 1902 57 FP

Winchell, H. H. Forsyth, 808 N. Emporia, 67214
(265-1684)
34 M 3545 58 TR

Winchester, Eugene B., 1148 S. Hillside, 67211
(684-0271)
18 M 3006 56 FP

Wisdom, Jay K., 1148 S. Hillside, 67211
(684-0271)
12 M 1902 42 FP

Wisner, Harry J., Jr., 3244 E. Douglas, 67208
(689-9169)
17 M 3005 43 RHU

Wittman, Albert F., 425 E. Murdock, 67214
(263-4021)
10 M 2834 38 GS

Wolfe, Frederick, 1035 N. Emporia, 67214
(685-1335)
36 M 3508 66 IM

Wolfe, Ted W., 3333 E. Central, 67208
(685-1291)
36 M 3901 61 R
Wood, Gary B., 1148 S. Hillside, 67211
(684-2131)
21 M 2802 45 IM
Woodard, Lawrence E., 3244 E. Douglas, 67208
(689-9234)
15 M 1606 41 OBG
Woodhouse, Charles L., 959 N. Emporia, 67214
(265-8821)
10 M 1902 34 OTO
Wray, A. James, 120 E. 21st, 67214
(838-4912)
20 M 1902 49 FP
Zeller, Orville A., 2322 E. Central, 67214
(263-6186)
18 M 2002 51 ANES
Zimmerman, Kenneth D., 3801 S. Oliver, 67210
(687-3925)
29 M 3901 55 OM

WILSON—913
(Central Kansas Society)

Dlabal, Frank A., 67490
(658-2400)
07 M 1902 45 FP

WINCHESTER—913
(Jefferson County Society)

Huston, Francis W., 66097
(774-2150)
06 M 1601 34 FP

WINFIELD—316
(Cowley County Society)

Brown, Harwin J., 1317 Wheat Road, 67156
(221-3200)
09 M 5605 35 ANES
Carro, Francisco A., Snyder Clinic, 67156
(221-3200)
23 M 27501 48 FP
Daehnke, Sigurd S., Snyder Clinic, 67156
(221-3200)
26 M 3005 60 FP
Depoe, Joseph H., 324 State Bank Bldg., 67156
(221-4980)
31 M 1902 57 FP
Grosjean, Wendell A., Snyder Clinic, 67156
(221-3200)
06 M 1902 31 GS
Hoyle, Winthrop E., Snyder Clinic, 67156
(221-3200)
22 M 702 47 OPH
Kaufman, Leland R., 221 W. 8th, 67156
(221-3350)
33 M 1902 61 FP
Kaul, Anand N., 5 Sharon Acres, 67156
(221-3200)
39 M 49530 61 IM
Keegan, Reuben G., 1211 E. 5th, 67156
(221-6100)
37 M 53902 68 GS
MacKillop, Daniel, Jr., 4 Fleetwood Dr., 67156
(221-3200)
11 M 2407 38 R
Miller, Franklin R., 1317 Wheat Road, 67156
(221-3200)
02 M 2401 27 IM
Oh, Shi-Han, Snyder Clinic, 67156
(221-3200)
35 M 58302 60 OBG
Snyder, C. John, Snyder Clinic, 67156
(221-3200)
38 M 2401 64 GS
Snyder, Howard E., Snyder Clinic, 67156
(221-3200)
03 M 4102 27 GS, TS
Vaidyanathan, P. C., 1211 E. 5th, 67156
(221-6100)
30 F 49504 59 GS
Vaidyanathan, S. V., 1211 E. 5th, 67156
(221-6000)
30 M 49504 59 TS
Wells, Alvin Y., 1707 E. 10th, 67156
(221-0009)
97 M 1902 37 OO
Wells, Bruce W., 221 W. 8th, 67156
(221-3388)
39 M 1902 64 IM
Wells, Max W., 221 W. 8th, 67156
(221-3350)
12 M 1902 36 FP
White, R. Burnley, 117 W. 9th, 67156
(221-2950)
24 M 1902 52 FP
Winblad, James N., 1211 E. 5th St., 67156
(221-6100)
27 M 1902 53 GS

YATES CENTER—316
(Allen County Society)

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(625-2312)
46 M 512 73 FP

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Principles of Medical Ethics of the American Medical Association

Preamble

These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

Section 1

The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

Section 2

Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

Section 3

A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

Section 4

The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5

A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

Section 6

A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

Section 7

In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

Section 8

A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

Section 9

A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10

The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

Wichita Branch—KUMC

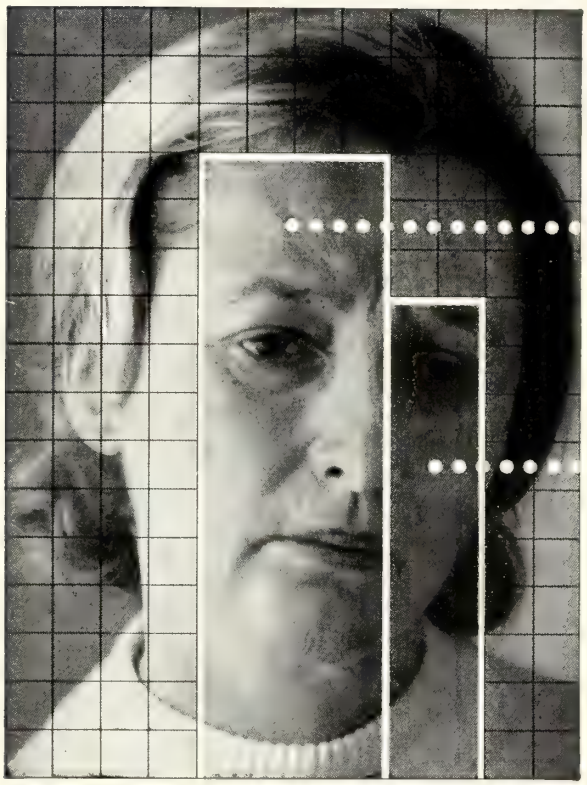
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1975

VOL. LXXVI
NO. IX

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

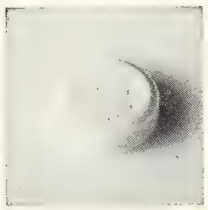
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

According to her major
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patient with severe
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sound like depression.
is because her problem,
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ve anxiety, is often accom-
ed by depressive symptom-
gy. Valium (diazepam)
provide relief for both—as
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d, the depressive symp-
associated with it are also
n relieved.

There are other advan-
s in using Valium for the
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anxiety with secondary
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l. This means that im-
ement is usually apparent
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



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in psychoneurotic
anxiety states
with associated
depressive symptoms

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o habituation and dependence. In
nancy, lactation or women of child-
ng age, weigh potential benefit
st possible hazard.

autions: If combined with other psy-
opics or anticonvulsants, consider
fully pharmacology of agents em-
d; drugs such as phenothiazines,
ptics, barbiturates, MAO inhibitors
ther antidepressants may potentiate
tion. Usual precautions indicated in
nts severely depressed, or with latent
ession, or with suicidal tendencies.
Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Nutley, New Jersey 07110

Volume LXXVI, Number 9—September, 1975

The JOURNAL of the KANSAS MEDICAL SOCIETY

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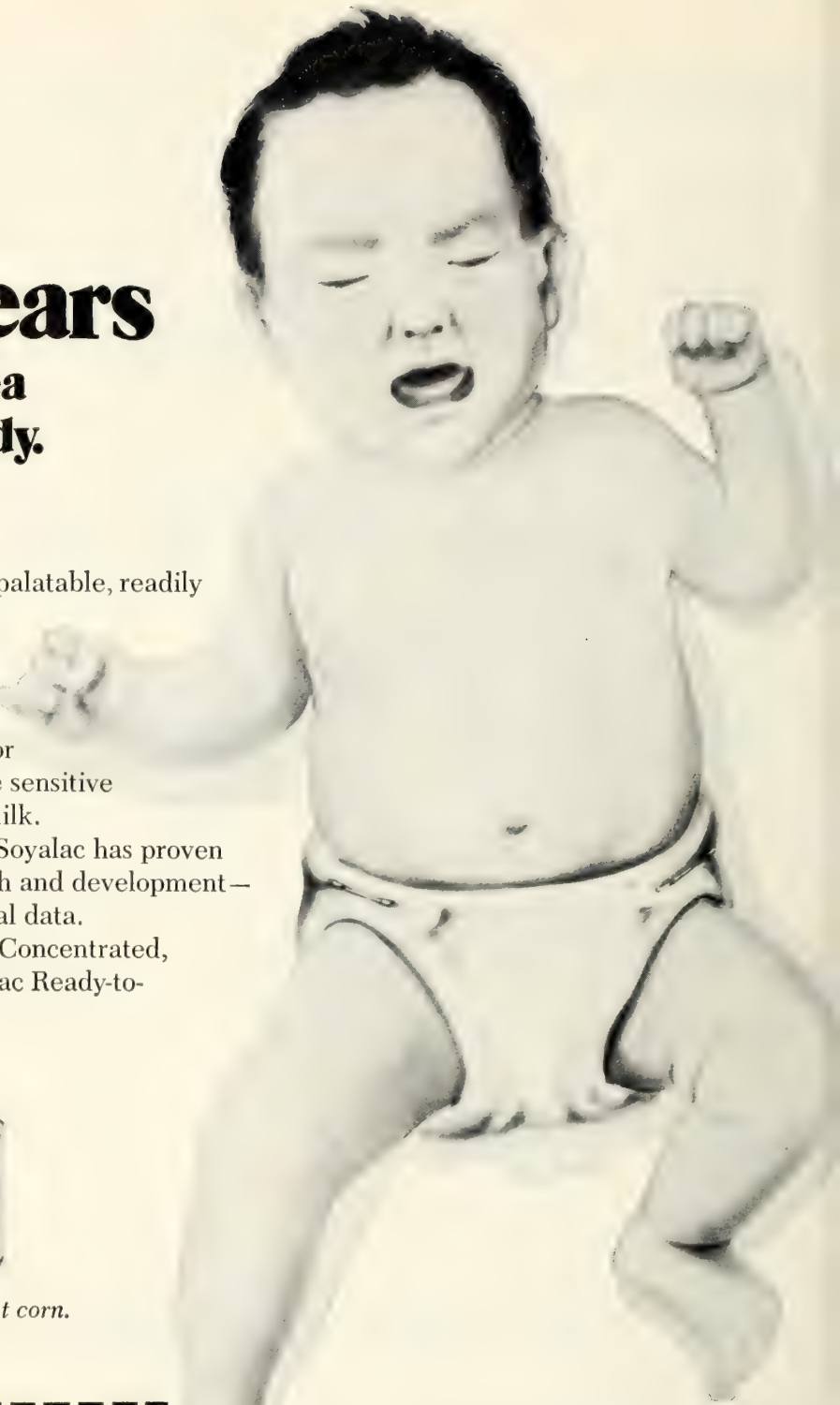
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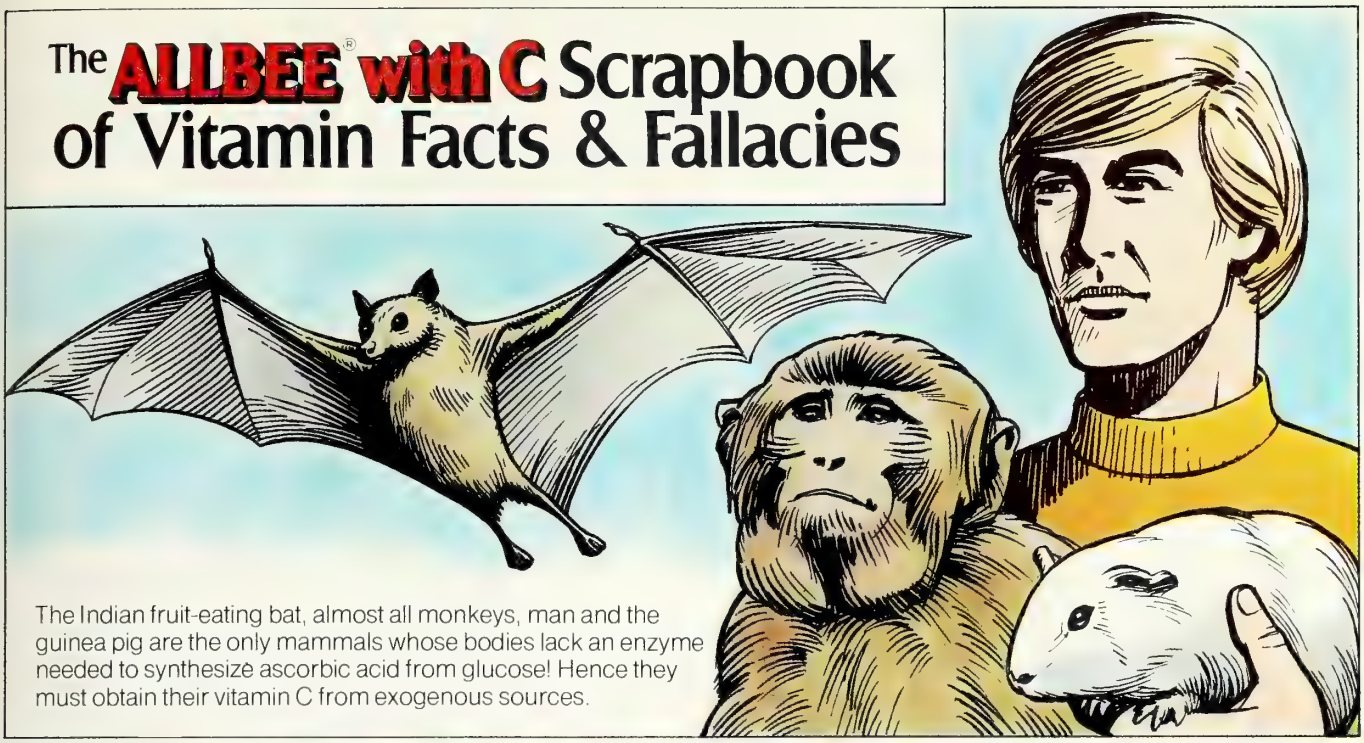
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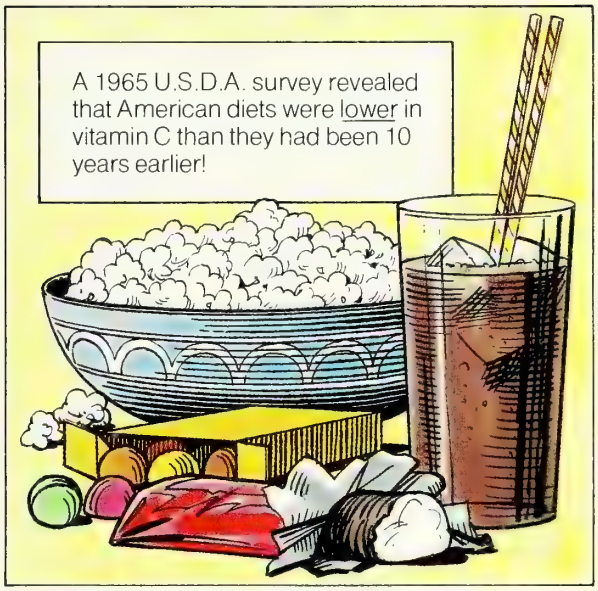


The Indian fruit-eating bat, almost all monkeys, man and the guinea pig are the only mammals whose bodies lack an enzyme needed to synthesize ascorbic acid from glucose! Hence they must obtain their vitamin C from exogenous sources.



De Joinville writing about a 13th century crusade reported that barber surgeons had to "cut away the dead flesh from the gums to enable people to masticate their food." The disease he described was probably scurvy.

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Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

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Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.
Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.
Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.
Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.
Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.
Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.
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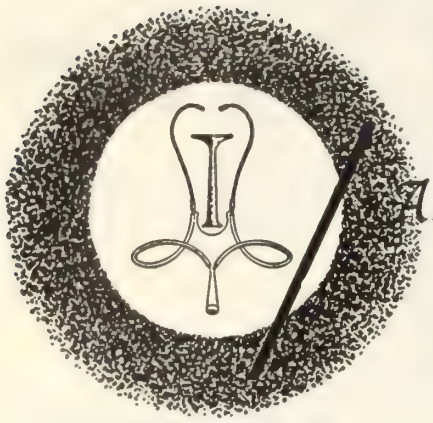
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Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the **Doctor's Calendar.** ***Notice of the session is posted in advance to allow the physician time to make preparations.***

SEPTEMBER

Sept. 7-12 — Flying Physicians Association, Lake Geneva, Wisc. INFO: Albert Carriere, 801 Green Bay Rd., Lake Bluff, IL 60044.

Sept. 12-14 — Mid-Continent Psychiatric Association, Alameda, Kansas City, Mo. INFO: J. L. Chapel, U. of Missouri Medical Center, Columbia 65201.

Sept. 18-20 — Colorado Medical Society, Broadmoor, Colorado Springs. INFO: D. G. Perry, 1601 E. 19th, Denver 80218.

Sept. 19-26 — American Society of Clinical Pathologists and College of American Pathologists, Conrad Hilton Hotel, Chicago. INFO: P. E. Raleigh, 2100 W. Harrison, Chicago, Chicago 60612.

Sept. 20-25 — American Association of Ophthalmology, Sheraton-Dallas, Dallas. INFO: L. A. Zupan, 1100 17th St., N.W., Washington 20036.

Sept. 26-27 — Kansas Heart Association 26th Annual Meeting, Broadview Hotel, Wichita. INFO: KHA, 5229 West 7th St., Topeka 66606.

Sept. 26-28 — Central Association of Obstetricians and Gynecologists, Broadmoor, Colorado Springs. INFO: C. P. Goplerud, M.D., University of Iowa Hospitals, Iowa City 62242.

OCTOBER

Oct. 13-17 — American College of Surgeons, Fairmont Hotel, San Francisco.

Oct. 15-19 — American Ass'n for Clinical Immunology and Allergy annual meeting, Riviera Hotel, Palm Springs. INFO: AACIA, PO Box 912, Omaha, Nebraska 68101.

Oct. 27-29 — Omaha Mid-West Clinical Society, 43rd annual postgraduate, Hilton Hotel, Omaha. INFO: John F. Fitzgibbons, M.D., 1040 Medical Arts Bldg., Omaha 68102.

NOVEMBER

Nov. 2-7 — Seminar: Toward Understanding Human Behavior and Motivation, The Menninger Foundation, Topeka. INFO: Registrar, Box 829, Topeka 66601.

Nov. 3-8 — Laryngology and Bronchoesophagology, University of Illinois Medical Center, Chicago. INFO: Eye and Ear Infirmary, 1855 W. Taylor, Chicago 60612.

Nov. 7-8 — Mid-American Breast Cancer Symposium, Concourse Hotel, Madison. INFO: Wisconsin Breast Cancer Detection Foundation, 7803 Mineral Point Rd., Madison 53717.

Nov. 28-Dec. 6 AMA Clinical Meeting, Hawaii.

DECEMBER

Dec. 4-5 — Annual clinical meeting, Kansas City Society of Ophthalmology and Otolaryngology, Plaza Inn, Kansas City, Missouri. INFO: Roger A. Weis, 3036 Gillham Rd., Kansas City, Missouri 64108.



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Second Annual
Wichita State University Branch
of KUMC
Issue

The Dean's Letter—1975

Wichita State University Branch of KUMC

D. CRAMER REED, M.D., *Wichita**

TWELVE MONTHS have passed since our initial report. During this period there have been many "happenings" in the Branch. And like the current "good news—bad news" jokes, we have both kinds to write about. We have experienced a few disappointments with respect to projected goals along with a great deal of success in the academic and service related activities.

In the March 1975 issue of the JOURNAL OF THE KANSAS MEDICAL SOCIETY, Executive Vice Chancellor Rieke wrote in complimentary general terms about the Branch. This, our second annual report to our KMS friends, will consist of a potpourri of current Branch activities in the interest of updating your information-data base regarding what is happening at the Wichita State Branch of the University of Kansas School of Medicine.

In the interest of improving clarity, we have elected to group our comments concerning the Branch into the following categories: (1) Student-Curriculum Related Activities; (2) Faculty Development; (3) Physician-Community Service Programs.

Student-Curriculum Related Activities

The Branch charter class of 14 students graduated with their Kansas City campus peers in May. Five of the class chose primary care post-doctoral programs; two have military service obligations to fulfill; seven of the remaining twelve were accepted into Wichita hospital graduate medical education programs. Consequently, for reasons Executive Vice Chancellor Rieke has previously cited, the likelihood of these young physicians remaining in Kansas to practice is considerably enhanced.

Another pleasantry to report has to do with National Board, Part II examination results. All Branch students passed the examination. Their composite scores exceeded the national mean. One student scored 100 per cent in the OB-Gyn section, and two others scored in the 90th percentile in at least three sections of the test. While each student is to be commended for these fine results, we are mindful that such a favorable outcome could not be assured without the continued support of the three community hospital teaching panel members.

With the hope of stimulating appropriate student interest in seeking solutions to or at least developing a better understanding of a number of current health care problems, a series of monthly meetings has been scheduled with the dean. Here the students, in an informal brown-bag-lunch atmosphere, engage the dean in two-way discussions of such topics as: the rural health care dilemma; the service and leadership roles of the physician in the community; new health legislation and its effect on the physician of tomorrow; hospital and medical ethics; consultation and referral courtesy, etc. Hopefully such dialogue(s) will prepare future graduates to assume more productive interpersonal relationships on entering private practice.

On January 3, the second class, consisting of 26 students from KUMC and one transferring from Guadalajara, arrived on the Wichita campus for their clinical clerkships. As described in the 1974 Dean's Letter, for the next week the students participated in a series of clinical orientation sessions designed to facilitate their introduction into the hospital-patient care environment.

On the recommendation of the Liaison Committee on Medical Education, Branch administration is developing plans to accept approximately the same number of students in January 1976. At that time there will be some 52 to 55 students in Wichita to complete their medical education. By 1977, it is presumed the class size will be increased to about 40 students, and by 1978 should approximate 60, including Kansas residents accepted for transfer from other medical schools.

Two new clerkships emphasizing primary care are now operational. The first, "Introduction to Family and Community Medicine," is supervised by an advisory committee of practicing Wichita family physicians. Approximately one half of this obligatory four-week rotation consists of student assignments to selected practitioners' offices. The remainder of the clerkship is devoted to community health projects, interdisciplinary case conferences, and student participation in health station clinics. These clinics are operated by the Wichita-Sedgwick County Department of Community Health in cooperation with a number of Medical Society of

* Dean, Wichita State University Branch of University of Kansas School of Medicine, 2221 N. Hillside, Wichita, Kansas 67219.

Sedgwick County members who have volunteered to supervise medical and allied health students in this integrated education clerkship.

The second clinical activity is a rural community preceptorship and is supervised by Dr. Bill Gardner, who previously served as chairman of the Department of Family Practice. This clinical experience conducted in Harper—while not designed to replace the conventional preceptorship program—has been planned as an intriguing alternate for students desiring to be involved in a controlled private practice-rural community hospital experience. The Harper project has been planned to include interdisciplinary clinical education involving Branch medical students and allied health students from the WSU College of Health Related Professions. Planning is also under way to develop postgraduate medical education programs to be based at the Harper District #5 Hospital. Such programs would be targeted for physicians practicing in a radius of less than an hour's drive from Harper, thereby obviating the need for them to be away from their practice for extended periods. Eventually, as part of the prototype package as a service to interested hospitals, selected in-service programs may be developed and made available to hospitals located in that area in conjunction with other educational agencies.

Ultimately, if the Harper project should prove effective, consideration is being given to extending the concept to other similar Kansas communities.

Faculty Development

As of this writing, the Branch has nine geographic full-time faculty members. In addition, there are 24 Wichita physicians who devote a significant portion of their time to teaching and other Branch activities for which they receive reimbursement as part-time faculty. Obviously, there must be a nucleus of such individuals in any educational endeavor. However, without the participation and support of the other 216 clinical associates, the Branch would not have achieved its present level of success.

Several full-time faculty have joined the Branch in recent months. They include Dr. Don George, Director of Graduate Medical Education for the Department of Psychiatry and Associate Dean for Administration; Dr. Vernon James, Department of Pediatrics and Medical Director for the Institute of Logopedics; Dr. Hewitt Goodpasture, Department of Internal Medicine; and Dr. Sergio Bustamante, a neonatologist, Department of Pediatrics.

Three new positions have been filled to coordinate required and elective clerkship activities in pathology, radiology, and anesthesiology. Drs. William Reals, Simon Hershorn, and Robert Robinson were elected by their community hospital and professional subspecialty groups to serve as directors for these respective important teaching areas.

In addition to the recruitment of Branch faculty, appropriate department chairmen have been involved in search committee activities for Wichita Veterans Administration Hospital medical staff positions; this is a Dean's Committee hospital which will be utilized for medical student and new Branch residency program rotations.

A most important faculty activity concerns the Department of Family and Community Medicine. With the acceptance of the responsibility for supervision of the Harper project, Dr. Bill Gardner relinquished the chairmanship of this department. At this time, a vigorous recruitment effort is concluding to identify the best possible candidates from which to select a new chairperson. This position is considered to be extremely important not only to the Branch but also to the success of the combined efforts of KUMC and the Branch in developing a systems approach to the preceptorship-outreach programs. Prior to Dr. Gardner's vacating the chairmanship, he initiated plans to develop a new concept of graduate and postgraduate medical education for family practice; further development and implementation of such innovations must await appointment of the new chairperson.

Physician-Community Service Programs

The Division of Postgraduate Education is the newest administrative unit to be established. Ultimately, a medical doctor will be appointed to direct the activities of this unit. Presently, a highly qualified individual with an extensive background in the behavioral science field is responsible for these activities. Several workshops and seminars have been developed in cooperation with various Branch departments and community hospitals for presentation next fall. An advisory committee of area physicians has been appointed to assist in establishing goals and priorities which will be coordinated with the Department of Postgraduate Medical Education at KUMC. Mrs. Ruth Feryok, Coordinator for Postgraduate Education, welcomes suggestions from interested area physicians regarding the kinds of programs the Division should consider. She may be contacted at the Branch mailing address or by phone, (316) 689-3144.

One of the most rewarding activities in which several Branch students have participated is entitled: "Wichita Public Schools Health Program." This is a health awareness program for grade school students in certain public schools sponsored by the Wichita Board of Ed-

ucation. Students volunteering to teach in the program have been warmly received by teachers and students alike. The Branch very much appreciates the participation of these socially oriented future physicians, who are making significant community contributions while learning first-hand something of the kinds of responsibilities they will be expected to fulfill following graduation.

Another kind of service-education activity in which the Branch is involved is a special summer camp for diabetic children called "Camp Discovery." Under the direction of the American Diabetes Association—Kansas Affiliate, Inc., the camp is designed to educate diabetic youngsters in an atmosphere of fun and recreation. Dr. Richard Guthrie, Department of Pediatrics, serves as camp medical director; WSU Physician's Assistant students and Branch medical students volunteer their time as camp counselors for this worth-while project.

The Branch has mailed over 300 letters to representatives for medically underserved communities in Kansas, inviting them to participate in the second Physician-Community Awareness program to be held in Wichita on October 18. While the objectives of this rural community service activity remain the same as last year, the program format will be entirely new. Interested physicians are encouraged to attend. It is hoped that a number of KMS members will be able to participate in the small group sessions along with lay community leaders from their areas of the state. This conference is sponsored by the Branch in conjunction with the Kansas Medical Society, Medical Society of Sedgwick County, and Wichita community hospitals. Additional information can be obtained by writing to Dean Kortge, Ph.D., Director of Special Projects, WSU Branch.

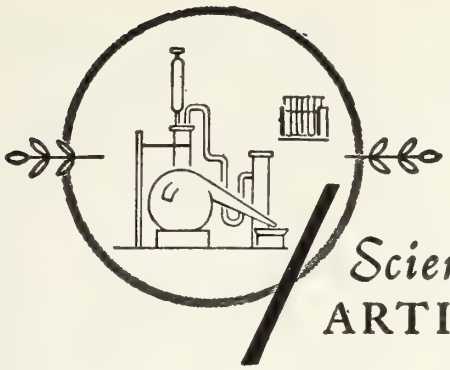
Failure to receive state funding for the previously approved psychiatric postgraduate education program constituted a serious loss for the Branch. Notice that the 1975 Legislature failed to appropriate funds for a new faculty member and four resident positions arrived after the physician residency program director had been recruited and three resident applicants accepted. It is generally conceded that absence of a graduate program hampers the development of effective teaching programs; consequently, the Branch is obligated to make every effort in the next several months to reestablish the need for state support for this graduate program.

It is anticipated that approval for the Branch community-wide pediatric residency program will be forthcoming from the AMA Residency Committee for Pediatrics in the next few months. Since the only other pediatric graduate medical education program is based at KUMC, there is obviously great need for a program in Wichita to educate pediatricians for practice in Kansas.

The central purpose of the WSU Branch, of course, will not likely change from year to year. This institution exists to promote the discovery of new ideas and to help undergraduate and graduate medical students learn in a community setting as a part of a complex society (not a task to take lightly). The success of the Branch depends not on administrative arrangements but primarily on the vitality of the total community; that is, the university, part-time community physician faculty, as well as the citizens of Kansas. The success thus far experienced by the Branch can be attributed to many elements: legislative support, the fine cooperation of Chancellor Dykes, acceptance by our academic and administrative peers on the Kansas City campus, and the continued willing participation of Wichita community physicians and hospitals.

Without the total support of Executive Vice Chancellor Rieke our progress would have been seriously handicapped. We look forward, however, to continued growth and development under the friendly guidance of Acting Executive Vice Chancellor David Robinson in whom we have the highest order of confidence.





That Ulcer Problem!

Selection of Appropriate Procedure for Duodenal Ulcer

GEORGE J. FARHA, M.D.* ***and*** **PATRICK N. BARKER, M.D.,†** ***Wichita***

DUODENAL ULCER is primarily a medical disease, however, because of its variable complications about 15 per cent of patients require surgical intervention. The formulation of a surgical procedure for the complications of duodenal ulcer has long been a dilemma evolving slowly during the past 30 years. Three satisfactory approaches have stood the test of time: subtotal gastric resection, vagotomy combined with antrectomy, and vagotomy combined with a drainage procedure. Newer procedures, such as gastric or parietal cell vagotomy with or without drainage, have been introduced but their effectiveness still awaits long-term evaluation.

The choice of operation for the complications of duodenal ulcer must be based upon sound physiologic principles as elucidated by Latarjet, Dragsted, Farmer, Smithwick, Herrington, and others. It is now apparent that each of the time-proved procedures named above has earned a permanent place in the armamentarium directed against the complications of duodenal ulcerations. This multiplicity of procedures and the strong difference of opinion indicate the need for familiarity with all these procedures.

The purpose of this paper is to review our experience with 234 patients presenting with one or more complications of duodenal ulcer, who were operated upon between July 1963 and June 1973, at St. Francis Hospital, Wichita. In addition to the 20 patients with pyloric channel ulcer, this series includes 25 patients who had combined duodenal and gastric ulcers, which were probably due to varying degrees of pyloric obstruction.

A review of 234 patients presenting with the complications of duodenal ulcer over a ten-year period, who underwent surgical intervention, shows a mortality rate of 1.3 per cent; a recurrence rate of 0.85 per cent; and morbidity of 10 per cent. The operative procedures utilized were tailored to fit the clinical and the pathologic findings of the particular patient.

Data

Age and Sex Distribution

The highest incidence of duodenal ulcer was in the fifth and sixth decades of life. The youngest patient was 16 years old, and the oldest 86 years; the average age was 50 years. Duodenal ulcer occurs more commonly in males than in females.[1–3] In this group of patients, there were 166 males and 48 females, a ratio of 3.5:1.

Surgical Indications (Table I)

Even though more than one indication were present in the majority of patients, an effort was made to classify each patient according to the indication which was directly responsible for the operation. Intractable pain

* Professor and Chairman, Department of Surgery, WSU Branch-KUMC; Director of Surgical Education, St. Francis Hospital, Wichita.

† Former senior Surgical Resident, St. Francis Hospital, Wichita. Present address: Pratt, Kansas.

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TABLE I
INDICATIONS FOR OPERATION

	Patients	
	NUMBER	PER CENT
Intractability	110	47
Bleeding	65	28
Obstruction	27	11
Perforation	32	14
Total	234	100

was the most common indication in this series (100 patients, 47%), followed by massive or persistent bleeding (65 patients, 28%). Acute perforation and obstruction were responsible for surgical intervention in 14 and 11 per cent respectively.

Operative Procedures (Table II)

The most common operative procedure utilized in this group of patients was vagotomy and antrectomy (154 patients, 65.8%). The second most common operation was vagotomy and drainage procedure (50 patients, 21.4%). Our preferred treatment for acute perforation of duodenal ulcer was closure of the perforation (29 patients, 12.4%). One patient who had vagotomy and pyloroplasty, but re-bled postoperatively, underwent subtotal gastric resection. A bilateral truncal vagotomy was invariably performed. If antrectomy was performed, a Billroth I reconstruction was utilized when possible. When necessary, a Billroth II antecolic reconstruction was performed. If drainage instead of resection was elected, a Heineke-Mikulicz two-layer pyloroplasty was preferred.

TABLE II
OPERATIVE PROCEDURE

	Patients	
	NUMBER	PER CENT
Vagotomy + antrectomy	154	65.8
Vagotomy + drainage procedure*	50	21.4
Subtotal gastrectomy	1	0.4
Closure of perforation	29	12.4
Total	234	100

* Includes 3 posterior gastroenterostomies.

Complications (Table III)

Of the 234 patients, 23 (9.8%) developed major complications. Significant wound infection was noted in eight patients (3.4%). Evisceration occurred in four patients (1.7%). Pneumonia developed in two patients (0.85%). One of the three patients in whom stomal obstruction developed required reoperation; this complication followed an antecolic gastrojejunal anastomosis. One patient with delayed gastric emptying postoperatively had a Billroth I gastroduodenostomy; another had a pyloroplasty. Duodenal leak with fistula formation developed in three patients (1.3%). These occurred in patients with large duodenal ulcers involving the pancreas and common bile duct, who underwent antrectomy and vagotomy with Billroth II gastrojejunostomy. In every instance, the complication was anticipated and appropriately drained, resulting in satisfactory healing with no deaths. It is our belief that with adequate distal anastomosis and with proper drainage, most patients with duodenal fistula, when free of abscess, can be managed nonoperatively, utilizing hyperalimentation satisfactorily.

Major postoperative hemorrhage requiring transfusion occurred in two patients (0.85%), and was the cause of death in one. We attribute this low incidence of bleeding to careful hemostasis at the time of operation. One patient developed subphrenic abscess three months following pyloroplasty and vagotomy; this patient was drained and recovered satisfactorily.

TABLE III
POSTOPERATIVE COMPLICATIONS

	Patients	
	NUMBER	PER CENT
Wound infection	8	3.4
Evisceration	4	1.7
Pneumonitis	2	0.85
Stomal obstruction	3	1.3
Duodenal fistula	3	1.3
Postoperative hemorrhage	2	0.85
Subphrenic abscess	1	0.4
Total	23*	9.8

* Represents 10% of 234 patients.

Operative Mortality

There were three deaths in our group of 234 patients who underwent surgical treatment for the complications of duodenal ulcer. This hospital mortality rate of 1.3 per cent compares favorably with that reported in the literature. Eisenberg, Woodward, and Dragsted[3] report an operative mortality rate of 1.1 per cent for a series of 455 patients in whom vagotomy and a drainage procedure was performed. Herrington, Sawyers, and Scott[1] reported a mortality rate of 1.6 per

cent for vagotomy and antrectomy performed in 3,584 patients; Weinberg[4] reported 0.7 per cent in 1,022 patients after pyloroplasty and vagotomy; Edwards,[5] 2.7 per cent in his series of 1,127 cases of antrectomy and bilateral vagotomy. *Table IV* shows the analysis of deaths in our series.

The following is a brief history of the three patients who died.

Patient #1: A 49-year-old male sustained massive chest and pulmonary contusions in an automobile accident, and suffered an upper gastrointestinal hemorrhage from a duodenal ulcer ten days later. Vagotomy and antrectomy was performed. The patient died of pulmonary complications on the fourth postoperative day.

Patient #2: A 54-year-old male developed massive hemorrhage as a result of a penetrating duodenal ulcer. He underwent vagotomy and pyloroplasty and died of exsanguinating hemorrhage on the sixth postoperative day.

Patient #3: A 54-year-old male was admitted for severe chronic obstructive pulmonary disease. A tracheostomy was performed. Three days later he developed a massive gastrointestinal hemorrhage, and vagotomy and pyloroplasty was performed with suture ligation of the bleeding point. He died a pulmonary death on the eighth postoperative day.

Results

Long-term followup results are not available at the present time for this group of patients. For the purpose of this presentation, we have documented two recurrences among our 234 patients followed for 20 months to 10 years. Both of these patients had pyloroplasty and vagotomy; one had a recurrence four years later and underwent antrectomy. He is well at present. The second patient developed recurrence three years after vagotomy and pyloroplasty, underwent antrectomy, and is also well at this writing. This recurrence rate of 0.85 per cent compares favorably with other reports. Herrington[1] reported recurrence of 0.6 per cent, utilizing vagotomy and antrectomy in 3,584 patients with good followup of up to 25 years. Smithwick[6] reported a 1.5 per cent recurrence in patients followed for 15 years who had hemigastrectomy and vagotomy. Eisenberg and Dragsted[3] reported a recurrence of 3.6 per cent, utilizing vagotomy and drainage procedure with only a three-year followup. Nobles[7] reports a 28 per cent recurrence in 102 patients followed for 15 years who had gastroenterostomy and vagotomy.

Discussion

The most widely used surgical procedures in the treatment of complications of duodenal ulcers are antrectomy with bilateral vagotomy and bilateral vagoto-

TABLE IV
ANALYSIS OF DEATHS*

Sex and Age	*Adm. DX*	*Indication*	*Procedure*	*Op. Findings*	*Day of Death*	*Cause of Death*
49 M	Pulmonary contusion	Bleeding	V & A	Penetrating DU	4th PO day	Respiratory insufficiency
54 M	COPD	Bleeding	V & P	Large DU	8th PO day	Respiratory insufficiency
54 M	DU	Bleeding	V & P	Penetrating DU	6th PO day	Hemorrhage

* 3 deaths—represents 1.3% of 234 patients.

TABLE V
INDICATIONS AND OPERATIVE PROCEDURE

	No. of Patients	*Type of Procedure*			
		VAG. + ANT.	VAG. + DRAINAGE	CLOSURE	SUB. GAST.
Intractability	110	75	35	0	0
Bleeding	65	54	10		1
Perforation	32	1	2	29	
Obstruction	27	24	3*	0	0

* Gastroenterostomy.

my with a drainage procedure, either pyloroplasty or gastroenterostomy. Advocates of each procedure claim superior results. The success of an operation is determined by mortality and morbidity, the recurrence rate, functional benefits derived by the patients, as well as the experience of the surgeon performing it.

It has been our philosophy that if morbidity and mortality are to be minimized and recurrent ulcers to be avoided, an effort should be made to tailor the operative procedure to fit the specific clinical and pathologic findings of a particular patient. *Table V* shows the type of procedure selected for the specific indication with which the patients present; our plan of management for these complications is as follows.

Intractability

Certain types of duodenal ulcers are more likely to require surgery on the basis of intractability. These are chronic posterior penetrating ulcers, postbulbar ulcers, pyloric channel ulcers (of which 20 are included in this series), ulcers which have previously caused a major complication, ulcers developing in the very young or the very old, and chronic ulcers in alcoholics and psychologically unstable patients. Because of the diversity of patients and their pathologic findings, we feel more variation in the choice of the surgical procedure is permissible. In patients with channel ulcers in whom widening of the gastric outlet will promote healing, in elderly or otherwise debilitated patients and the young, thin female patients in whom a gastric resection might result in further weight loss, vagotomy and a drainage procedure has been our preferred treatment. For the remainder of the patients with intractability, antrectomy and vagotomy is our treatment of choice.

Bleeding

In the patient with upper gastrointestinal bleeding, immediate gastric lavage is carried out followed by immediate gastroscopy. If the patient has been treated for duodenal ulcer prior to his current bleeding episode, blood loss is replaced and the patient is taken to the operating room for definitive surgery. If he has had no previous diagnosis of duodenal ulcer, a short period of observation is utilized. If four units (2,000 cc) of blood is necessary to maintain adequate vital signs or to replace blood loss, then immediate operation is also utilized. If the bleeding subsides, then the patient is treated medically until he either bleeds again or develops another complication.

With this plan of management our operative mortality is 5.5 per cent, still over four times greater than that for the overall series. This figure represents a lower mortality rate than other reported series for bleeding (10-25% Snyder,[8] Farris,[9] Dunphy[10]). The mortality rate can be lowered further only by earlier surgical intervention, before associated pathologic conditions combine to worsen the outcome.

In patients who are bleeding or have a combination of complications, thus exhibiting a virulent ulcer diathesis, our operation of choice is antrectomy and vagotomy; when extreme debilitation or old age are present, vagotomy and drainage procedure with suture ligation of the bleeding point is selected.

Perforation

Closure of perforations due to duodenal ulcer has been performed in nearly all cases. One patient, who perforated while hospitalized for a bleeding duodenal ulcer, underwent antrectomy and vagotomy, and two patients in whom perforation had just occurred underwent vagotomy and pyloroplasty.

Obstruction

Early operation following gastric decompression is performed in patients with partial or complete gastric outlet obstruction. Our treatment of choice for these patients was vagotomy and antrectomy, with the exception of three, in whom vagotomy and posterior gastroenterostomy was performed due to either advanced age or the presence of an inflammatory mass involving the head of the pancreas and the common bile duct.

Conclusion

Antrectomy and vagotomy is our most commonly used procedure for patients with bleeding duodenal ulcers, except for those who are debilitated or very old; in this latter group vagotomy and pyloroplasty with suture ligature of the bleeding point is preferred. In patients who present with partial or complete gastric outlet obstruction, our procedure of choice following gastric decompression is antrectomy with vagotomy, except in those individuals who are found to have a severe inflammatory mass involving the head of the pancreas and the common bile duct, when vagotomy and posterior gastroenterostomy is preferred for its obvious safety. In patients with channel ulcers, in elderly or otherwise debilitated patients, and in the young, thin female presenting with intractable duodenal ulcer, our treatment of choice is vagotomy and pyloroplasty; for the remainder of patients presenting with intractability, antrectomy and vagotomy is carried out.

Our efforts in selecting the proper operative procedure for this group of 234 patients resulted in a mortality rate of 1.3 per cent, a morbidity rate of 10 per cent, and a recurrence rate of 0.85 per cent. If massively bleeding patients who underwent surgery as an emergency life-saving measure were excluded from this study, our mortality rate would be 0 per cent.

(Continued on page 205)

Noninvasive Technique

Measurement of Muscle Tension

H. SAJON JOYNER, Ph.D.* ***and*** **BRENT E. FINLEY,†** ***Wichita***

THE CORRELATION of muscle strength with a noninvasive measurement of physiological phenomena is useful in certain physiotherapy applications, and in monitoring some disorders involving muscular performance.

The relationship between muscular tension and the frequency spectrum of the electromyogram (EMG) has been well established. However, most of the previous works have dealt with establishing either center frequency versus tension relationships;[1, 2] center frequency versus fatigue relationships;[3] or the predominant frequency versus the observed muscle.[2, 4] Although the total EMG signal varied with muscle contraction, no direct relationship with muscle force output and total EMG signal was demonstrated.

It has been found that an additional, and an extremely useful, correlation exists between muscular tension and a specific frequency band-pass of the EMG spectrum. Surface electrodes placed over the muscle in question were used to receive the EMG signal. The rectified signal of the properly filtered EMG was directly related to muscular contraction. Attempts were not made to find a predominant frequency band for each muscle, rather, a frequency band which would be applicable to numerous exoskeletal muscles was found.

The initial assumption for the band-pass frequency as being in the region between 40-60 Hz was based on previous work by Scott and Gates,[4] which indicated the dominant frequencies to be below 100 Hz.

The muscle initially tested was the gastrocnemius. To record the relative force exerted by the muscle, the subject's leg was placed in a jig containing a force plate with two strain gauges attached. The strain gauges were connected as a two-arm bridge. Calibration of the force plate by means of dead weights assured operation in the linear regions. The subject was instructed to press against the force plate providing a strain signal which was displayed on one channel of a Beckmann Dynagraph.

Simultaneously, the EMG signal received by a special op-amp probe was band-pass-filtered and recorded on the second channel of the Dynagraph.

A plot of the square of the average filtered EMG signal difference versus the average force appeared to be quadratic of the form:

$$\text{Force} \propto (\text{EMG})^2$$

where the constant of proportionality is a function of the electronics, area of the surface electrodes, etc.

Previous work by Sato and Tsuruma[5] has shown the predominant band for the gastrocnemius is approximately 100-200 Hz. It was felt, however, that if a direct correlation between force and the EMG signal filtered between 40-50 Hz could be established, the basic premise of the technique would be justified. The data taken supports the use of the 40-50 Hz region of the EMG signal. Initial studies of the flexor digitalis and the biceps brachii have also exhibited direct correlation between force of contraction and the square of the processed EMG signal.

It now appears that a selected frequency region of the EMG signal can be directly correlated to the centractile strength of a muscle. It also appears that by proper selection this region can be common to many muscles.

A further application of noninvasive EMG measurements is desirable for both clinical and research applications involving the recording of useful power output of a muscle during contraction. To facilitate these applications, the method must be capable of making measurements during rapid isotonic contractions. For this reason, it must be able to monitor physiological signals, including transients. In addition, it must produce a signal which is free from any extraneous signal due to movement artifact or noise from the surrounding environment, *e.g.*, fluorescent lighting.

For large superficial skeletal muscles, a technique making use of mini surface electrodes and a properly processed EMG signal has been developed. This technique is based upon the much cited synchronization theory of muscular contraction.[6]

Basically, this theory states that as the muscle contractions become stronger, the motor units begin to fire in a more synchronous fashion. In effect this tends to shift the power density function (pdf) toward a specific frequency region *(Figure 1)*. It should be noted

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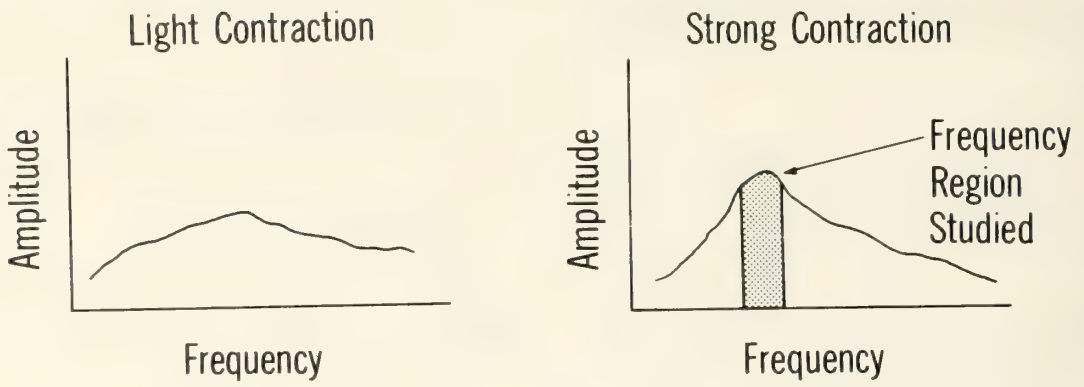


Figure 1

that the amplitude of this frequency region tends to increase as fatigue sets in.[7] Through the use of a band-pass filter to isolate this region (or a portion thereof), and with appropriate signal processing, the change in the power output of a muscle can be correlated with the processed signal.

For dynamic physiological measurements, Beckmann mini surface electrodes provided a means for eliminating much of the movement artifact. These electrodes are recessed silver/silver chloride pellets embedded in a plastic housing. An electrode jelly establishes the actual contact with the surface of the skin, thus producing a sound electrical connection.[8] The silver/silver chloride pellet forms a quick and stable equilibrium with the jelly.[8] The electrodes were attached to the skin by means of Datascope self-adhesive pads (type 683-0017). These pads served to both attach and protect the electrodes during the subject's movements.

The electrodes were connected to a preamplifier, which consisted of extremely low-current, battery-powered, solid state operational amplifiers connected in a high gain, common-mode configuration. The small size (40 cm^3) and light weight (21 gm) of the preamplifier allowed it to be directly attached to the subject. The output signal of the preamplifier was band-pass filtered by a General Radio Sound and Vibration Analyzer (type 1564-A) and then rectified by a Hewlett-Packard AC voltmeter (model 400E). The General Radio filter was selected because the center frequency of the band-pass is continuously variable from 2.5 to 25K Hz, and the width is selectable at 1/3 or 1/10 octave. In selecting the band width, it was found that the 1/3 octave band-pass tended to give a more stable output.

To test the method, experiments were done in which subjects performed various standard exercises. These exercises and the muscles studied were: (1) curls with dumbbells to study the biceps; and (2) exercycle riding to study the gastrocnemius. During these experiments, both the load (weight or torque) and the rate of loading were varied. In addition, the muscles were subjected to various levels of fatigue. These levels of fatigue were subjectively determined; however, they did provide a means of determining whether the system could measure this physiological state.

The system proved capable of providing a means for measuring muscle power output as a function of load, rate of loading, and degree of fatigue. Once attached to the subject, no amount of physical movement either of the electrode pads, electrode leads, or of the preamplifier could produce a noticeable signal output. The system was thus proven capable of producing an output which is free of any movement artifact.

The relationship of load to the area under the output signal (related to the power output of the muscle) is shown in both *Figure 2* (for the gastrocnemius) and *Figure 3* (for the biceps). In both cases there was an obvious correlation between load and area.

Figure 2 indicates that the rate of muscle contraction cycles also correlated to the output signal. The area is shown to increase as the number of revolutions per minute increase for a given torque rating of the exercycle.

The effect of the fatigue on the muscle compared to the nonfatigued state is shown in *Figure 3*. The ability of the system to demonstrate the onset of fatigue is shown in *Figure 4*. This figure is a portion of the raw data output which clearly shows the increase in area as the degree of fatigue increases.

The system also proved valuable as a means of instantly determining if the subject "cheated" on an exercise. For example, if the subject used body movement during curls, the decrease in area is readily apparent, as shown in *Figure 5*. Further, if the subject allowed the test leg to coast during the exercycle riding, a similar decrease in area was noted.

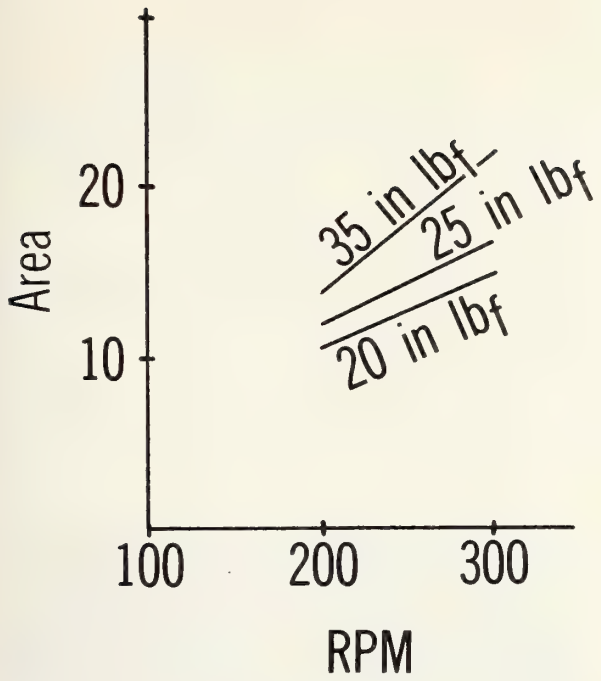


Figure 2

In the final analysis, the system demonstrated its capability for providing valuable information concerning useful muscle power output during dynamic contraction. This system does provide data which would be useful in both clinical and research applications.

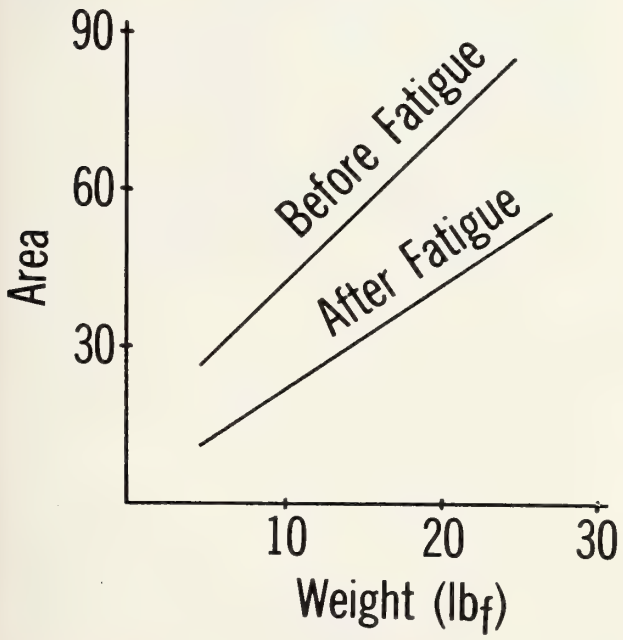


Figure 3

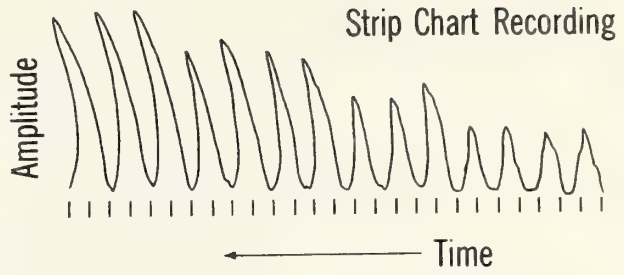


Figure 4

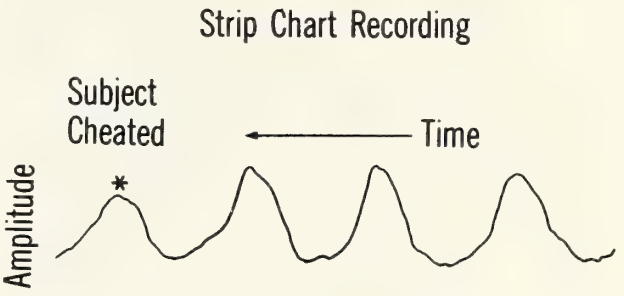


Figure 5

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Kirlian Effect

Cancer, Coronas and Questions

JOHN R. LESTER, Ph.D., ***Wichita***

The Kirlian effect recorded on film appears as an "energy envelope" which surrounds all living organisms. This study examined the phenomenon and its possible application to disease. Fingertip corona patterns were analyzed in terms of form and color, both quantitatively and qualitatively, and differentiated between cancer patients and normals. The corona, as photographed, proved divisible into inner and outer auras with different properties, and confirmed observations of a physician in 1920. Resistance to electrical conduction appeared as an important variable. This new method of measurement, yielding empirical data, permits replication and points toward further research in a frontier area.

KIRLIAN EFFECT dates from 1930, but in the United States a burst of interest and research appeared in 1972.[1] Because the technique has wide potential application in medicine, psychology and biology, research along several avenues is indicated. The present research examined fingertip corona patterns to detect individuals who had significant life threatening physiological conditions. Questions posed by these findings are considered in the discussion section of this paper.

The "Kirlian effect" recorded on film appears as an "energy envelope" which surrounds all living organisms. Electric power drawn from 120 v AC is passed through a variable voltage transformer to a high frequency induction coil, resulting in high voltage and high frequency output.[2] The subject is one plate of a two-plate capacitor, separated from the other plate by a dielectric. When activated, high frequency AC power appears to flow on the body surface and the resulting emission appears as a corona around the subject.

Angyal[3] has proposed the term *bionegativity,* which is defined as "a constellation in which one or more part processes disturbs the total function of the organism." His application of Gestalt principles for an understanding of the dynamic interaction between individual and environment appears appropriate in providing a frame of reference for this study. He states:

> A given disturbance of integration may not remain isolated but may induce further disturbances, and the picture may thus become increasingly involved. It can be shown in many cases that the origin of such disturbances lies in the interference of some outside agent with the functions of the organism, that is, in trauma. The causes of trauma can be gross physical or chemical agents, pathogenic microorganisms, psychological factors and the like.
>
> . . . Life itself, by its very nature, can be considered as a traumatic process. The self-expansive activity of the organism consists in interaction between the individual and the environment. While the organism is governed by its inherent dynamic tendencies, the other factor in the question, the environment, follows the laws of the physical world without regard for the needs of the organism. Therefore, every contact with the environment involves a greater or less trauma. The accumulation of the minimal effects of traumata manifests itself in aging and lead finally to so-called "physiological death."

Invoking Angyal's "system dynamics," a significant life threatening change in the organism would be expected to spread across intermediate systems and be reflected in a rearrangement of the parts in more distant regions, since a change in any part potentially involves the whole and vice versa. The author proposes that the quality and quantity of change in the fingertip corona will directly reflect threat to the organism.

With reference to Angyal's distinction between "rigid vs. plastic systems," the "energy envelope" seems to qualify as a plastic system, since there is evidence that it is influenced by conscious activity, appears to have a low degree of homeostasis, and by theory would have a broad range of functional variation readily reflecting spread to super and subordinate systems.

Kilner's description of auras, as they appear to the naked eye when viewed through a specially constructed filter of dicyanin, proved extremely accurate and precise.[4] Even with the advantage of the fine detailed results now produced by Kirlian photos, one could hardly improve on his description of the patterns. He utilized

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his findings in the diagnosis of a host of pathological conditions.

He divides the aura as follows *(Figure 1 and Table 1)*:

1. The etheric double, a band following the body contour 1/16 to 1/8 inches in breadth, with uniform width all around the body.

2. The inner aura, just outside the etheric double, the part near the body, more dense with a different texture from the more distant portion, 1½ to 3½ inches in breadth, boundaries determined by the distance the striae reach.

3. The outer aura commences where the inner leaves off, spreads around the body to a variable distance, no shape, outline gradually vanishes into space but its outer border is obvious enough for measurement.

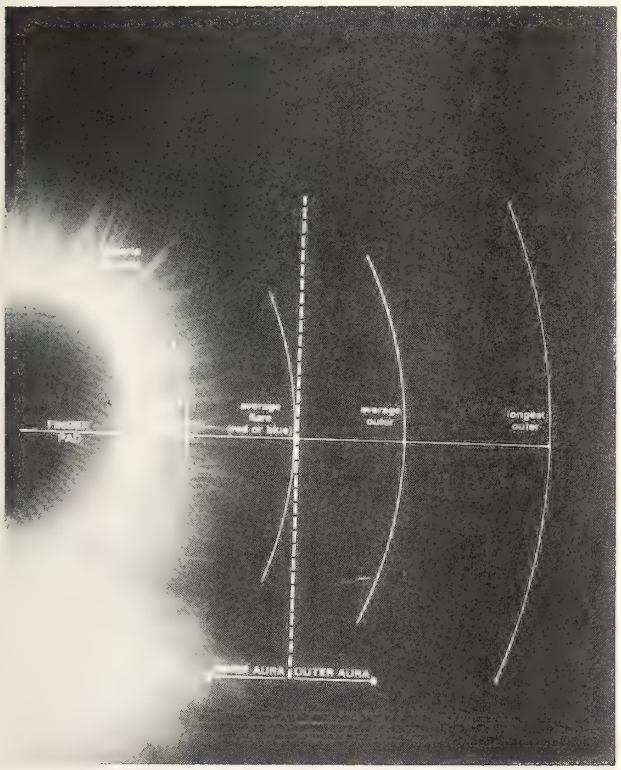


Figure 1. Fingerpad illustrating inner and outer aura with critical aura points indicated. Precise location of aura points is possible only in color photographs which reveal brilliant white and saturations of red, orange, yellow, magenta, and blue. The black and white reproductions illustrating this paper do not record the many variations because of the single emulsion property of such film.

With reference to disease, Kilner states:

Occasionally in disease, the inner aura disappears locally in toto, or what is more common, leaves a partially void space. This empty space, when it does include the whole width, is situated close to the body, superficially resembling a very broad etheric double, while the residue of the inner aura may retain its lineation, or may become granular. In none of these cases does the outer aura invade the territory of the inner, but it may be simultaneously affected.

TABLE I

DIFFERENCES IN AURA CHARACTERISTICS
Healthy vs. Ill

Healthy	Ill
etheric double:	
Crisp, brilliant white bubbles which are distinct, sharp, and well defined, edge of double is clear, concise, and usually completely surrounds the print.	Vague, mushy, often an absence of white bubbles, no true demarcation line on outer periphery such that it shades into the white.
inner aura (white):	
Long, distinct, sharp white flares often extending to the edge of the outer aura, frequently demarcation of the white before reaching the outer aura, "sun burst effect."	Short, clumped flares often so indistinct as to result in an opaque quality. Flares rarely extend to edge of the outer aura; rare demarcation of white near the outer aura, "eclipse effect."
*(shocking pink or light blue):**	
Line between inner and outer auras usually clear.	There is tendency to invade the outer aura, so that the outer aura seems to spring from it.
outer aura:	
Pronounced with frequent distinctive long, sharp, dark-blue dendrites.	Tends to be more constricted. While individual blue dendrites are often distinctive, there is frequently less blue at the base of the aura.

* The color seems dependent on the physical conditions at the time of exposure, *i.e.*, humidity, amount of static electricity, nature of insulation, and amount of air space behind the plate.

Referring to the inner aura force (IAF):

This is so easily modified by any local affection of the body, as to make the inner aura an extremely sensitive tell-tale, even though the deranged tissues may be some distance beneath the surface. It is, also, more or less under voluntary control; its activities more easily augmented than inhibited.

And finally:

Different states of ill health, either general or local, react upon the forces and indirectly on the two auras, altering them but not of necessity in the same manner. With a local affection it is by no means uncommon for the inner aura

to lose all its striae and to be transformed into a denser and more opaque mass, of a different shade or colour to the adjacent portion, or its striae may become more coarse and in appearance quite unlike the fine lines of health. Occasionally a space utterly devoid of inner aura may be seen. Whenever a change takes place over a large portion of the body, the inner aura may or may not be correspondingly narrow on one side or the other. When a contraction of the inner aura takes place, it is accompanied by some modification of texture, and constantly by further ill-defined changes. . . . The outer aura varies less than the inner. Its colour, texture and distinctness may change, but as a rule the chief alternation is in breadth; it contracts but never entirely vanishes, except under the influences of some external force artificially applied. Pathological changes, involving large portions of the body, or affection of the nervous system, may cause wide-spread alterations of this aura, which in certain circumstances are diagnostic. The outer aura may be contracted while the inner aura retains its proper breadth, but the converse does not occur, as the outer never maintains its normal size after the inner has shrunk.

From the above it follows that an analysis of the corona should be expected to yield evidence of a more central disturbance if present in the organism. The pattern of corona, in benign or disturbed states of the organism, should adhere to Gestalt principles of pregnanz, closure, etc., reflecting inherent adaptive dynamics. Where a corona is fractured there is indication of a reaction which seems to reflect the organism's attempt to reestablish the homeostatic balance of the corona. In this case the effect appears "desperate," while the "normal" blue corona, with accompanying blue dendrites, becomes a red smudge without dendrites. The amount of self-expansive activity should alter in proportion to the severity of the physiological threat.[3] Other preliminary findings clearly reflect the influence of conscious ideation by changes of colors, though the integrity of the pattern remains. The method of analysis of corona, proposed below, appears adequate to avoid confusion introduced by fluctuating emotional states of the subjects.

As working assumptions toward an objective interpretation of Kirlian photos, it is proposed that:

1. A disease condition will be directly reflected in fingertip corona by alteration of the pattern;

2. The amount of this distortion will be in direct proportion to the severity of the physiological condition. Differences in aura characteristics will be apparent;

3. Since blue seems the color of homeostasis and red the color of stress, an inverse relationship will exist between the ratio, blue/red versus severity of the physiological condition.

TABLE II

SUBJECTS: IDENTIFYING DATA

Experimental Group (CA)			*Control Group (Norm)*	
SEX	AGE	*Diagnosis*	SEX	AGE
F	49	Adenocarcinoma—left ovary w/metas.	M	49
M	20	Hodgkin's disease	F	18
M	39	Melanoma	M	30
M	78	Colon-rectal CA w/metas.	F	32
F	39	Sq. cell CA cervix, Stage IV	F	44
M	62	Adenocarcinoma, metastatic	F	49
F	69	CA of rt. breast, adenocarcinoma w/metas.	M	53
F	59	CA, right breast	F	51
F	66	Lymphosarcoma	F	66
F	67	Lymphoma	F	74
F	15	Leukemia(AML)	M	66
M	54	Adenocarcinoma	M	22
M	44	Melanoma	F	62
F	46	CA, duodenum	M	62
50.46		Means		48.43
17.05		SD		16.74
15-78		Range		18-74

Procedure

Subjects

The experimental subjects were 14 individuals currently receiving regular chemotherapy treatment for various forms of cancer *(Table II)*. The subjects were recruited from patients who appeared at the physician's office on a given day for their regular medical review. No patients approached refused to volunteer, but those with known coronary conditions and high blood pressure were excluded.

The control subjects were 14 individuals with no known significant physiological disturbance, selected for match with the experimental group in terms of age and sex.

Apparatus

The instrument employed was constructed from the components supplied in the Kirlian Electrophotography Kit No. 71,928.[2] The kit was assembled according to the manufacturer's directions with exceptions as follows: A ten-inch square wooden box was used as a container; the wire conducting current from the coil to the plate was frayed to create a star effect where attached

to the plate, rather than a single strand as suggested in the instructions; the tesla coil was insulated both by rubber and fiberboard between the coil and plate.

All photos were exposed with the transformer setting at 8 v. A timer was connected to the power source with the transformer left "on" so that the timer actually controlled the charge and the exposure time of 6 seconds.

All photos were taken and processed by a professional photographer following a standard procedure, using 4 x 5 inch *Kodak* Ekta color professional film, type L, with standard processing.

Examination Procedure

Photos of the patients were taken in a darkroom adjacent to the referring source. Photos of the normal subjects were obtained both in the experimenter's office and a private home.

On introduction, the experimenter advised the subjects of the purpose and nature of the study. Per caution of the instrument manufacturer, they were asked to exclude themselves if they had heart or blood pressure problems. They, or a legal guardian, were asked to sign a Research Release.

The patient was then asked to grasp the negative and positive leads of a Simpson 260 Voltmeter, one in each hand with thumbs pressed as hard as possible against the points of the leads. Body resistance in ohms was recorded by the experimenter. At the time of the experiment these readings proved so variable (range: 10,000 to 500,000) that the author decided to abandon this measure as unusable, and similar recordings were not obtained from the control group. However, the experimenter did make recordings of his own resistance each time prior to pairing with patient for a photo. A summary of this data appears in the analysis section.

The subject was directed to place his right index finger on the plate next to the experimenter, and the current was activated in order to familiarize him with the procedure. A spacer, consisting of a plastic wall plate (double socket), was used to align the fingers of both. The room was then darkened. The photographer removed the spacer and placed the film on the plate, with a tactile check for fingertip placement. On signal that all was in readiness an exposure of paired prints was made. Immediately following, the photographer removed the first film replacing it with the second sheet, this time to obtain the single print of the subject's right index finger. With the film secure the room was lightened and the procedure completed.

Analysis of Data

Reports on Kirlian photos have mentioned the variability of the results with emphasis on the subjective reactions of the investigators. In this study, for purposes of objective quantification and to avoid any possibility of systematic bias, all measurements were made by a rater totally unfamiliar with the material, the experimenter, and the purpose of the investigation. The rater operated completely blind, for all photos were coded from a list of random numbers and carried no other identifying data.

Quantitative Methods of Measurement

Several measures have been found useful in numerical definition of the corona (*Table III* and *Figure 2*). Fingerprints vary in size, consequently, comparison of coronas between two individuals must take this fact into account. Preliminary studies indicated that the horizontal dimension of the fingerpad remains quite stable over time and under varied conditions. Utilizing the horizontal dimension as a base measure, individual prints become more comparable by resorting to a ratio with horizontal dimension in the numerator. Horizontal dimension equals the inner distance of the fingerpad

TABLE III

Critical Aura Points
(All distances measured in cm.)

Vertical dimension	The inner vertical distance of the fingerpad limited at either extreme by the etheric double.
Vertical dimension (whole)	The total vertical distance of the extreme outer aura.
Horizontal dimension	The inner horizontal distance of the fingerpad limited at either extreme by the etheric double.
Horizontal dimension (whole)	The total horizontal distance of the extreme outer aura.
Longest flare	The single longest white flare extending from the etheric double toward the inner edge of the outer aura.
Average flare white	An estimate of the distance of white flares from the etheric double within the inner aura.
Average flare red or blue	An estimate of the distance of red or blue flares from the etheric double within the inner aura.
Longest outer	The distance from the etheric double to the extreme of the longest blue dendrite in the outer aura.
Average outer	An estimate of the distance from the etheric double to the end of the average blue dendrite in the outer aura.

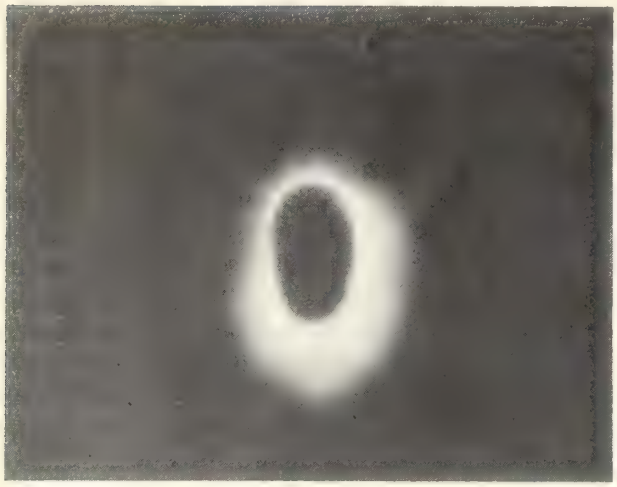


Figure 2. Fingerprint of normal subject, female, age 74.

in centimeters, limited at either extreme by the etheric double.

In measurement, using the etheric double as a reference point, a problem sometimes obtains with the print of a diseased individual. Kilner[4] referred to changes in the inner aura in disease which at times leaves a partially void space, superficially resembling a very broad etheric double. When this occurs, the precise point of reference—always clear in health *(Table I)*—is difficult to establish. Unsophisticated raters would vary somewhat in the choice of this reference point. In future studies, where the above effect appears, the author recommends that the inner edge of the inner aura be used. However, in this study, the rater was left to his own devices for fear of compromising the results by offering qualitative cues as to what reflects health versus illness.

The 4 x 5 inch photos were placed on a glass plate illuminated from behind by a G.E. 500 w, 120 v, 3200 K Photo-ELT; all measurements were made with dividers and recorded in centimeters.

Single prints

An analysis of the data utilizing the horizontal dimension/x ratio at critical aura points for the experimental and control groups appears in *Table IV*. Since a ratio is involved, the lower the magnitude of the measure, the greater the extent of the flare. The data indicates that the flares of the experimental group are significantly longer than those of the control group at every point of the aura except longer outer.

Paired prints

As a possible refinement of analysis, difference scores (subject-experimenter) were used to summarize this data which appears in *Table V*. The procedure has the effect of comparing each individual with the experimenter in terms of their simultaneous reaction to the charge as reflected in the photograph. When the horizontal dimension/x ratio is employed for analysis of this data, the mean magnitude of the experimenter's ratio is smaller than the mean magnitudes of both the experimental and control groups, *i.e.,* in interpreting the data, the lower the difference score, the longer the flare of that particular group. Probable reasons and the implications of this finding are discussed below. This data indicates that the flares of the experimental group are significantly longer than those of the control group at point average flare, red/blue and in the outer aura.

In an effort to examine possible interaction effects, the mean and standard deviation (SD) of distance

TABLE IV

SINGLE PRINTS

Means and SD of experimental (CA) and control (Norm) group, measurements at critical aura points in the form of horizontal dimension/x ratio: T-Test and probabilities (in all groups N = 14, df = 26).

Measure		*Mean*	*SD*	*SE*	*T-Test*	*Prob.*
Horizontal dimension	Norm	1.336	.195	.052	1.413	ns
	CA	1.243	.135	.036		
Horizontal dimension	Norm	2.702	.430	.115	2.725	$<.02$
average flare white	CA	2.108	.657	.178		
Horizontal dimension	Norm	1.764	.384	.103	2.134	$<.05$
longest flare	CA	1.495	.243	.065		
Horizontal dimension	Norm	1.611	.356	.025	3.636	$<.01$
average flare—red or blue	CA	1.173	.243	.017		
Horizontal dimension	Norm	0.665	.079	.021	2.814	$<.01$
average outer	CA	0.577	.081	.022		
Horizontal dimension	Norm	0.539	.059	.015	1.907	$<.10$
longest outer	CA	0.497	.055	.015		

TABLE V

PAIRED PRINTS

Means and SD of difference scores (subject-experimenter) at critical aura points: T-Tests and probabilities (for all tests N = 14, df = 26).

Measure		*Mean*	*SD*	*SE*	*T-Test*	*Prob.*
Horizontal dimension	Norm	.114	.173	.046	0.206	ns
	CA	.100	.181	.048		
Horizontal dimension	Norm	.137	.846	.244	0.793	ns
longest flare	CA	.359	.823	.220		
Horizontal dimension	Norm	.303	.222	.059	2.427	$<.05$
average flare—red or blue	CA	.093	.182	.049		
Horizontal dimension	Norm	.106	.062	.017	2.670	$<.02$
average outer	CA	.018	.101	.027		
Horizontal dimension	Norm	.071	.050	.013	2.175	$<.05$
longest outer	CA	.009	.091	.024		

from origin at critical aura points for the experimenter paired with the experimental and control groups are presented in *Table VI.* This data, utilizing horizontal dimension/x indicates that the experimenter had significantly longer flares in the inner aura when paired with the experimental group, as compared to distance obtained when the experimenter was paired with the control group.

Qualitative Method of Measurement

Two unsophisticated raters were asked to classify the 28 coded individual prints into two groups: one representing health, the other illness.

Rater One stated that the amount of blue was used as a basis for differentiation, and 3 CA and 3 Normal were misclassified for a chi square corrected for continuity of 7.00 p.<.01.

Rater Two misclassified 3 CA and 2 Normals for a chi square corrected for continuity of 9.19 p.<.01.

Tabulation indicates that these two raters had three of their misclassifications in common.

Related Measures

The mean and SD of resistance measures in ohms for the cancer group and the experimenter were as follows: mean 89,700, SD 124,970; mean 17,210, SD 7,190. Despite the extreme variability in the cancer group, which was the basis for initially rejecting the measure, a T-test between the means was 2.090, p.<.05 for 26 df.

Discussion

In the absence of theory, we are on a frontier where empirical evidence is more needed than premature formulations. The present data poses questions which may become part of an eventual answer. Certain features

TABLE VI

PAIRED PRINTS

Means and SD experimenter's measurements (horizontal dimension/x ratio) when paired with the experimental (CA) and control groups (Norm): T-test and probabilities (for all tests N = 14, df = 26).

Measure		*Mean*	*SD*	*SE*	*T-Test*	*Prob.*
Horizontal dimension	Norm	1.200	.066	.018	0.883	ns
	CA	1.179	.058	.017		
Horizontal dimension	Norm	2.059	.061	.016	3.918	$<.001$
longest flare	CA	1.671	.352	.094		
Horizontal dimension	Norm	1.186	.154	.041	3.638	$<.01$
average flare—red or blue	CA	1.021	.056	.015		
Horizontal dimension	Norm	0.596	.038	.010	0.216	ns
average outer	CA	0.599	.029	.008		
Horizontal dimension	Norm	0.520	.042	.011	0.818	ns
longest outer	CA	0.531	.022	.006		

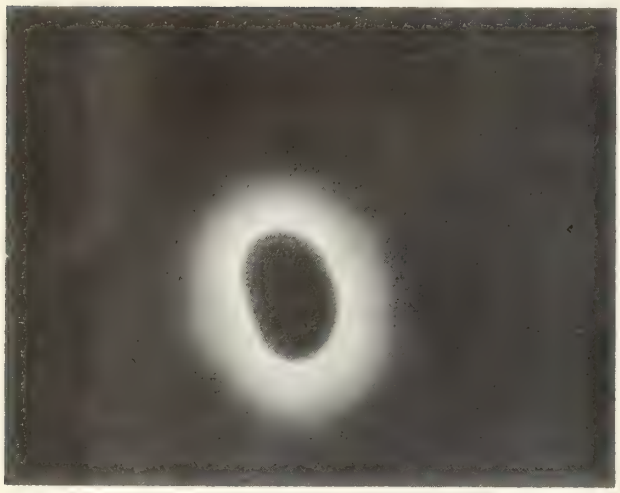


Figure 3. Fingerprint of cancer patient, female, age 56 (CA of right breast).

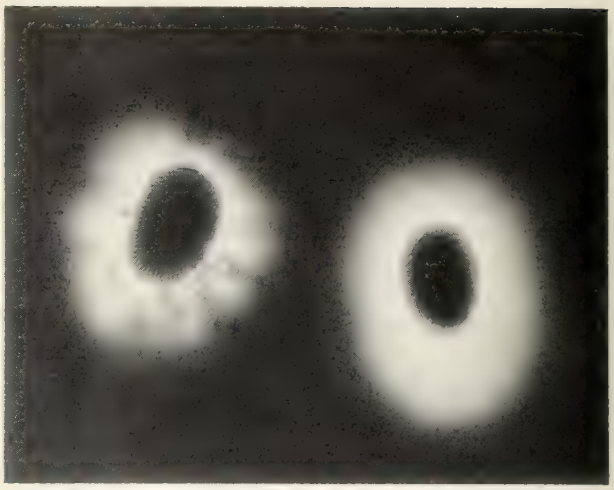


Figure 4. Paired prints: experimenter (left); CA patient (right), male, age 62 (adenocarcinoma, metastatic).

require emphasis and are reviewed in this section.

The patients in this study were in varying stages of illness and were receiving varying amounts of medication. Thus, not only the state of the illness, but reaction to medication become a factor in evaluating the results.

When the single-print results were reviewed, there was some support for Kilner's report that in disease the inner aura loses all its striae and becomes a denser, more opaque mass. Correspondingly, his fine lines of health are quite apparent in the prints of the normal subjects. As Kilner stated, the color, texture, and distinctiveness of the outer aura does definitely change in the patient sample. It is a combination of these factors which makes possible the classifications discussed under Qualitative Analysis.

From Kilner's statements one could infer that contraction, particularly of the outer aura, would appear in the patient group. However, in the single-print sample the opposite occurred. All measures indicated that the patient group showed extension both of flares and size of the corona when compared to the control group. Combining the quantitative and qualitative analysis, it appears that disease produces an increase in expansive activity but at the expense of the neat homeostatic balance present in the pattern of the healthy corona. Specifically in the cancer group, good form was disturbed and pregnanz suffered over the entire pattern. While the extension of the longest outer dendrites of the ill equalled or exceeded that of the normal, the overall visual effect was one of constriction of the outer aura with a definite reduction in the blue at its base. Considering Kilner's methods of observation, the present results tended to confirm his reports despite the apparent contradiction. One could not expect him to have been able to see the relatively fewer blue dendrites which have greater linear extent in illness, since there is a significant reduction of blue at their base. Phenomenologically, he was correct. It may be just that this technique captures more of the picture than the naked eye.

A digression is necessary to explain the fact that the mean magnitude of the examiner's ratio was always smaller than the mean magnitude of both groups on each measure. This effect stems from repeated exposure of the experimenter to the electrical charges. The experimenter's body resistance to electricity both during this study and in other supplementary work dropped from 35,000 ohms to as low as 10,000, with repeated exposure to the tesla charge. In fact, of the 14 patients who were measured with the ohm meter prior to the experiment, only 2 were below the experimenter's mean in body resistance. Future studies, which use a pre- versus post-technique, especially if the time interval is short, should take this factor of lowered body resistance into account when making comparisons.

It was this factor of the experimenter's lowered resistance which began speculation on resistance per se as a possible key to explain the results. An analogy was proposed with reference to the results which obtain when an electroencephalograph lead is improperly connected to the subject, resulting in high resistance. The consequences of a poor connection are in the form of a tracing with much more extensive cycles combined with a "lot of junk" which obscures the pattern.

In order to examine this possibility, a supplementary experiment was devised. A print was first obtained in standard fashion and then the procedure was repeated, but this time the subject's index finger was covered with a surgeon's rubber glove with some oil added to

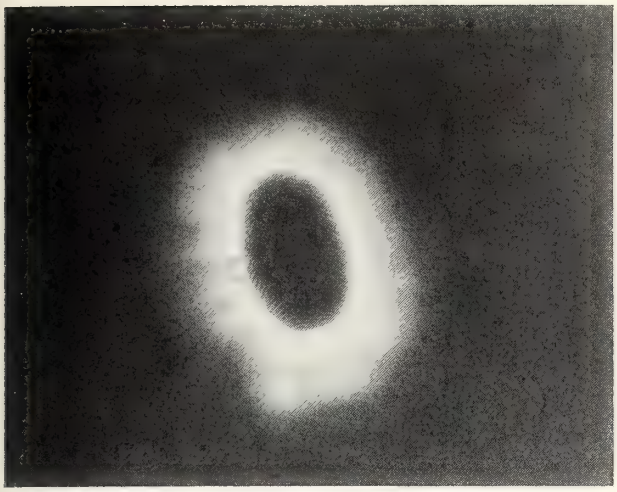


Figure 5. Normal subject, male, age 15.

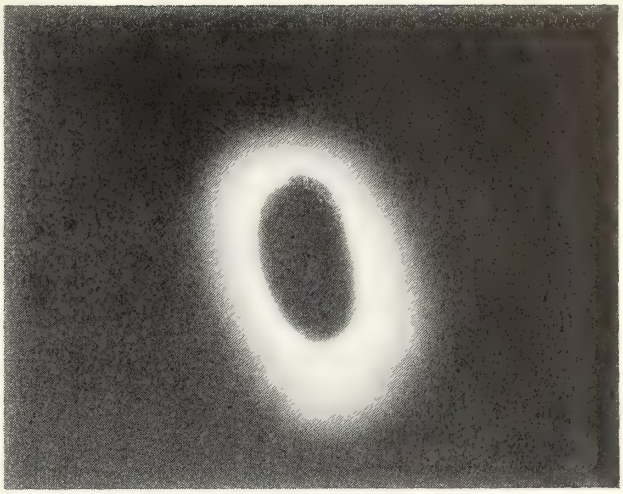


Figure 6. Same subject as in *Figure 5*, index finger covered with surgeon's glove.

increase the electrical resistance of his index finger. The following findings were obtained when measurements between the naked and gloved finger were compared: in the inner aura, as measured by the horizontal dimension/x ratio, the average flare—white, longest flare, and average flare—red/blue all increased in magnitude, *i.e.,* the flares got shorter; while in the outer aura, average outer, longest outer, and horizontal dimension whole, all decreased in magnitude, *i.e.,* the flares got longer. Visual observation of the gloved print indicated that it approached the pattern of illness, apparent in the patient sample, with but one exception: the amount of blue present in the outer aura remained essentially normal *(Figures 5 and 6).* When this print was mixed with a coded sample of the control group and patients, the observer who used blue as a basis for classification did not hesitate to call it normal, although "it looked funny in the center, like some of the sick ones." A crossover design using two paired subjects, with and without the glove, yielded exactly equivalent results to those obtained for the single subject. To understand the results, it is proposed that the cancer patients have significantly high resistance to electricity while the experimenter has significantly low resistance. It is a fair assumption that the control group subjects fall between the patients and the experimenter with respect to resistance.

Our supplementary experiment indicated that high resistance increases the length of flare in the outer aura and shortens flares in the inner aura, *i.e.,* there is the splash effect similar to that produced by a poorly attached electroencephalograph lead.

The results suggest that more energy is expended by the cancer group when compared to the control group over the entire corona. This may reflect the compensatory effects of the ill organism in interaction with the environment. If so, the expansion is least effective as compared with healthy subjects at the extreme periphery of the corona. Can we conclude that the ill organism is burning itself up in efforts at compensation?

By utilizing the factor of the experimenter's extremely low resistance when compared to the cancer group, it is possible to draw inferences regarding the dynamic features of the inner and outer auras by examining interaction effects in the paired prints. Competition of the experimenter with the subject for power in the system was differentially altered as a function of the partner's physical state. Experimenter had significantly longer flares when paired with the cancer group than with the normal group, but only in the inner aura. Paralleling this finding, the reader will note the reversal of mean magnitudes in horizontal dimension/longest flare, suggesting longer flares at this point for the healthy subjects as compared to the cancer group *(Table V).* This only reversal of mean magnitudes implies that something is going on in the inner aura during interaction. This may be an indication of more successful compensatory efforts in the healthy subjects or in the experimenter when compared with the cancer group. Significant differences between the cancer and non-cancer groups appeared in average flare, red/blue, and the outer aura. These results may reflect the splash effect from a different perspective, emphasizing its concentration in the outer aura. It should be recalled that the supplementary experiment, where resistance was artificially increased, produced a similar effect of longer flares in the outer aura and shorter ones in the inner aura.

In sum, the two groups can be differentiated in terms of the characteristics of their fingertip coronas both quantitatively and qualitatively. The corona itself was

divisible into inner and outer segments with different properties. The normal individual tended to have longer flares in the inner aura and relatively shorter flares in the outer aura, reflecting a more organized, compact Gestalt which was also qualitatively apparent. The opposite pattern was obtained with the ill subjects in that there was a tendency to relatively shorter flares in the inner aura and relatively longer flares in the outer aura. This later effect was precisely what occurred when, in the supplementary experiment, resistance was artificially increased by use of a glove, with the one exception: the pattern of blue retained its integrity.

The results seem to lend support to Kilner's work and are comfortably incorporated within Angyal's conceptions. A method of quantitative measurement of fingertip coronas has proven useful in differentiating between groups. Body resistance to electricity has appeared as an important variable. The data stands on an empirical base and develops more questions for future research.

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George Lewis, Ph.D., recruited the rater and assisted in the design and completion of this investigation.

All photos were made by Jim Edwards, Rorabaugh & Millsap Studio, Wichita.

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On Psychiatric Diagnosis

"Dynamic Psychiatry"

AGUSTIN M. CARRIZOSA, M.D., ***Newton***

DYNAMIC PSYCHIATRY refers to that approach in psychiatry which is concerned with the psychological and social dynamics of behavior, its pathology and its therapeutic use, in contradistinction to classical psychiatry which follows more closely the medical model and is more concerned with illness, its diagnosis, prognosis, and treatment.

The questions are: (1) What is the place of diagnosis in dynamic psychiatry; and (2) How can it be formulated to be of help to the clinician for the treatment of the patient.

The usefulness, value, and reliability of diagnosis for therapy have been highly questioned in psychiatry. The classification of patients, which leads to their labeling according to categorical nomenclatures, has caused great confusion and disillusionment, particularly in regard to its usefulness for treatment intervention.

In a recent article, Bachrach[1] touches on important aspects of the diagnostic process in psychiatry. Although one may disagree with the author's definition of diagnosis—which seems to include several steps of the clinical method, such as anamnesis, diagnostic examination, treatment prescription, and prognosis—he brings up very interesting questions and makes an analysis of the various factors involved in making a diagnosis and its complexity. He points out how diagnosis in psychiatry is influenced by the diagnostician's interest, training, experience, identifications, character attitudes, cognitive style and interpersonal-cultural heritage, as well as by institutional and group influences derived from the circumstances in which he makes his observations.

Diagnosis, however, is basically related to understanding: to understand, explain or determine the nature of something, a problem or a diseased condition, even if at times we may not be certain of the cause of the process. The main despair and confusion in regard to diagnosis in psychiatry seems essentially related to the fact that there are various theoretical models and approaches, each having different understanding of the nature of the condition requiring treatment.[2]

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The Theoretical Conceptual Model of Reference

Diagnosis in psychiatry depends to a great degree on the theoretical orientation of the clinician, which guides his observation, interpretation, and treatment prescription. The theoretical model allows for a systematic and comprehensive understanding of what is being observed. The observed phenomenon will then be translated in terms of the theoretical model, which can be communicated to those who share the same conceptual model.

The place of diagnosis and the relationship between diagnosis and therapy in psychiatry are discussed.

In psychiatry, however, we may have not yet reached a theoretical conceptual model which may be sufficiently adequate to fit and explain the whole range of human behavior and its dynamics, and be shared by a sufficient number of people. There is one in operation, however, related not only to theories of behavior but to individual idiosyncracies and ideologies. So, the problem of semantics and communication is still a serious one, particularly due to the fact that "words don't mean the same thing to everybody" as they reflect very personal interpretations.

When the process of diagnosis is in the hands of a team or multidisciplinary group, as is often the case in psychiatry today, the problem becomes even more complex. It has to take into account not only the theoretical model in operation, but the various and diverse idiosyncracies and ideologies of each one of its members, the interpersonal conflicts and institutional influences as those mentioned by Bachrach.

In this regard, the ideas of Enrique Pichon-Riviere[2] pertain to the need which a group involved in a task (like that of diagnosis or therapy) has of achieving a common conceptual referential scheme, which he calls ECRO (Conceptual Referential Operative Scheme—in English CROS). He calls it "operative" too, as it will apply to the task involved and, in this regard, be task oriented.

Each member brings to a group his own individual referential scheme based on his own individual idiosyncracies, ideologies and theoretical orientation, as well as his personal style, experiences, and needs. This individual referential scheme will get involved in a process of dialectic interaction with the individual scheme of the other members of the team.

Such a process will finally lead to the achievement of a common denominator, from which the CROS will emerge. Naturally, this requires a constant and continuous process of maturation within the group. The important thing, as Pichon-Riviere very graphically points out, is to keep the "dialectic spiral" circling around without ever becoming a closed circle (like a vicious circle) because of misunderstandings based on contradictions or ambiguities, or the establishment of a "dilemmatic" situation which only allows for one alternative and the consequent stereotyped approach to the task.

The CROS will closely fit and transcend the explicit theoretical model (psychoanalytic, behavioristic, etc.), as it will also include the whole range of peculiarities and subtleties of the unique characteristics of the group or situation from which it emerges.

Once a CROS is achieved, communication and functional role definition within the group will improve ("all are talking the same language") and the group will become more productive and effective in its task. The group will also be enriched by the contribution of its heterogeneous membership, which has become homogeneous toward the task.

One of the important steps of this process also is the passage from a "vulgar" to a "scientific" conceptual language of communication. Vulgar language is a needed step, because the scientific conceptual language may have no meaning if it is not built on the more concrete, closer-to-experience, vulgar language most commonly used by lay people to refer to behavior, feelings, and thoughts. Conceptual language, however, is also a needed passage to lead to theoretical formulations which may describe and organize experiences into a more comprehensive and integrated whole. Without a conceptual theoretical model, observations remain fragmented, overlapping, unrelated, fail to make sense to the observer, and less sense to the person who has to use the information.

It seems, then, that in order for information (like diagnostic information) to be communicated and really make sense to the recipient, it is necessary that the recipient not only share the explicit theoretical model of the informant, but that he also share in the elaboration of its interpretation and application. The reverse will also be true for the informant when he wants to select the therapist, individual or institution. The explicit theoretical model alone is not enough.

The Relationship Between Diagnosis and Therapy

The intimate relationship that exists between diagnosis and therapy, and the fact that the process of diagnosis goes together with the process of therapy, should also be taken into consideration.

During the intensive process of interaction with the diagnostician, individual or group, the patient goes through very significant experiences which may change his dynamic picture, in lesser or greater degree, in terms which may be highly significant for his future interaction in treatment. Sometimes, the diagnostic process by itself may constitute the whole treatment, leading to the resolution of the complaints and reasons for consultation. As a matter of fact, this was the whole idea at one time: that the discovery (diagnosis) of the cause of the symptoms cured them. Perhaps nowhere else in medicine is diagnosis so therapeutic. On the other hand, the diagnostic experience, particularly if it disregards the therapeutic aspect of it, may even be detrimental to treatment.

So, it seems that the classical medical diagnostic model does not apply to dynamic psychiatry very well. The difference centers in the fact that the process of diagnostic interaction produces changes in the condition to be diagnosed, and cannot be limited to pure inquiry or diagnostic examination as it is subject to a constant and reciprocal feedback which modifies the object and the subject, the inquirer and the inquired.

In medicine, only to a minimal degree does the patient change or is the illness affected by the diagnostic procedure. Diagnosis can be separated from treatment, and can even precede it, which is the more common and effective way to proceed. Diagnosis in dynamic psychiatry may resemble a little more what in medicine is called "diagnostic therapeutic trial," which is therapy and diagnosis at the same time.

The important factor which should be taken into consideration is the fact that the patient, during the diagnostic process, establishes a very meaningful relationship, of a therapeutic value, with the diagnostician, so that the diagnostic process becomes operative in therapeutic terms from the beginning.

When this happens in a group, particularly in a community setting (like a therapeutic community), the patient not only establishes meaningful relationships with those around him, but he also assumes new and various roles, more or less stable, which constitute significant changes and experiences of a therapeutic nature from

which he deals with his conflicts, feelings, and thoughts. The diagnostic understanding of the patient will also be determined, to greater or lesser degree, by the roles he assumes during the interaction.

Summary

It is difficult to separate clinical diagnosis and therapy, in time and practice, in dynamic psychiatry. (Psychodiagnostic testing, which represents a different kind of operation, is not included in this discussion.) Diagnosis and treatment constitute an integrated whole of a process of interpersonal interaction with diagnostic and therapeutic implications. This is a constant and continuous process, never ending, which makes new discoveries of diagnostic and therapeutic significance.

It is difficult to communicate this whole process to a clinician, who shares neither the explicit theoretical model nor the underlying details of the operation.

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That Ulcer Problem!

(Continued from page 190)

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Perinatal Care

Regionalization in Kansas

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Results of a review of the first year of regionalization of perinatal care in Kansas are reported as experienced by the Wichita State University Branch of KUMC.

In June 1973, the State of Kansas began the development of regionalization of perinatal care by the formation of a Statewide Perinatal Steering Committee composed of pediatricians, obstetricians, family practice physicians, public health personnel, and nurses. The purpose of this committee was: (1) To establish Level I, II and III care centers throughout the state; (2) To make a coordinated effort in the development of the regional concept; and (3) Assist the tertiary centers in established a system to transport high-risk mothers and neonates to various care centers.

Kansas University Medical Center (KUMC) and Wesley Medical Center (WMC) were designated as the two Level III care centers by the committee. St. Anthony's Hospital, Hays, and Stormont-Vail Hospital, Topeka, were designated as Level II centers. The remaining Level I and II care centers for the state were to be designated as communities establishing their facilities within the guidelines of the American Academy of Pediatrics.

In April 1974, a proposal was submitted to the Kansas Regional Medical Program (KRMP) entitled, "Regionalization of Perinatal Care in Kansas."[1] This proposal was funded and the program implemented in mid-1974. In addition to the support of personnel in the two tertiary centers, KRMP provided for the operation of two ground transport units as well as in-house education and a state-wide outreach program for postgraduate education for nurses and physicians. The implementation was accomplished through the cooperative efforts of the departments of pediatrics and obstetrics and gynecology of the Kansas University School of Medicine at its Kansas City and Wichita locations, utilizing KUMC and WMC facilities.

Both Level III centers began the development of mobile intensive care transport units. Kansas University Medical Center began planning for a newborn mobile intensive care unit, while Wesley Medical Center developed a unit to transport the high risk mothers and the high risk neonates. Wesley Medical Center basic transport unit was purchased through a private donor and equipped with monies from KRMP. This unit was placed into service for neonatal transport in June 1974, with the transport of high risk mothers initiated in January 1975. As of May 1975, this unit has completed its one-hundredth run. This one-year report concerns the Wesley Medical Center—Wichita Branch activities in the program.

Education

During the first year, postgraduate courses for nurses in high risk obstetrics and neonatology have been developed at Wesley Medical Center. This program has had ten nurses from other hospitals in the state enrolled in a three-week course. The course consists of one week of didactic information and two weeks of clinical experience in the obstetric and newborn intensive care areas. Two nurse practitioners are responsible for coordinating this experience. The course objectives are to increase nurses' awareness of the high risk maternal and neonatal patient, and to learn the techniques

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necessary to assist in caring for the patient until transport to a tertiary or secondary care center can be achieved. Two sessions have been completed to date, as well as an in-service program for Wesley Medical Center nursing personnel.

The perinatal team is available, by invitation, to present programs on regionalization of perinatal care, transport of the high risk patient, and subject matter about high risk mothers and neonates. The team has participated in 12 such programs throughout the state. During these visits, the team has been asked and is available to assess the facilities and equipment needs of the local hospital.

A perinatal seminar is tentatively scheduled for February 4-6, 1976, sponsored by Wesley Medical Center and the Wichita Branch. Dr. Ed Hon, Chief, Perinatal Research, University of Southern California, will participate in this seminar, as well as others involved in high risk perinatal care. This seminar will be open to physicians, nurses, and other involved personnel.

Special Facilities

In addition to the newborn and obstetric intensive care units, the ambulatory care unit at Wesley Medical Center has established a high risk obstetric clinic on Wednesday afternoons, to offer consultation to any physician in the state. Coupled with this clinic, a high risk obstetric laboratory is being developed which will broaden the scope of fetal assessment in utero.

An incoming toll-free WATS line is available at Wesley Medical Center for referral services. The Xerox 400 telecopier system, over which segments of fetal monitor records or other data can be transmitted, is integrated into the perinatal care system and is currently available. Consultation is encouraged.

Transport

One of the objectives of regionalization of perinatal care is recognition of the high risk patient and, when in the patient's best interest, transportation of that patient to a secondary or tertiary care center. It has been well established that the expertise in the care of the high risk patient develops through the concentrated experience of highly trained personnel supported by the most modern laboratory facilities and equipment available on a 24-hour basis.

The Wesley Medical Center ground transport system works within a 100-150-mile radius of the center. The technique of rendezvous has been used when distances exceed 150 miles. Air transport has been utilized through charter and military aircraft when distance is too great and the patient's condition warrants a more rapid accessibility to intensive medical care.

Wesley Medical Center mobile unit, named "Betty," carries a team of 4-6 trained personnel including a physician, nurse, respiratory therapist, driver and, when necessary, an anesthesiologist. Neonatal equipment on board includes cardiac, respiratory and temperature monitors, incubator, oxygen, and anesthesia equipment. Mothers can be monitored by fetal monitor, directly and indirectly. Necessary equipment and instruments are carried for deliveries. The care available to the neonate in the mobile unit corresponds to the care given in Wesley Medical Center newborn intensive care unit. Although "Betty" does not have x-ray or blood/gas measuring capabilities, these diagnostic parameters can be obtained prior to transport at several of the referring hospitals and the results telephoned en route.

Followup

Followup of the patients served and evaluation of the services provided is an important aspect of the program. This is being accomplished in several ways. A questionnaire has been circulated to all referring physicians for their critique and assistance in the improvement of the service. Of the questionnaires sent, 50 per cent were returned. From these, several areas needing correction were identified and the deficiencies eliminated.

A second mechanism of evaluation is to have the involved infants return to the pediatric clinic at Wesley Medical Center for post-transport assessment. To date, 38 transported infants have been seen. Only two of the infants at the time of the assessment visit demonstrated symptomatology necessitating hospitalization: one with a strangulated hernia and anemia, the other with pneumonia.

The community health nurse from the referring communities becomes involved with most of the transported infants following their dismissal from Wesley Medical Center. This provides the family with additional professional health care services in their own community and frequently enables early recognition of problems in the high risk patient. It has been shown that when the family constellation is placed under extraordinary financial and emotional stress, there is an increased potential for the development of problems.[2] Such services have been found to be extremely important.

Because of the importance of maintaining the family constellation and keeping them in touch with their high risk family member, a full time social worker is a member of the perinatal team. This individual actively participates in the inpatient as well as followup care of these patients.

TABLE I
TABULATION OF MATERNAL TRANSPORT

			Infant Results			
Age	*Mat. Complications*	*Mat. Outcome*	GEST. AGE	WEIGHT	APGAR	*Infant Outcome*
20	Preeclampsia; breech, cardiac distress, bicornuate uterus	Good	30	Unknown	—	Stillbirth, cong. anomalies
16	PROM* X 4 weeks, bleeding	Good	28	1020 gms.	6/6/7	Live, bilateral hernias
21	PROM* X 3 days. No prenatal care, late decelerations	Good	34	2532 gms.	6/8	Live
19	PROM*	Good	34	1790 gms.	7/7	Live, preterm
22	PROM*, breech	Good	24	Unknown	—	Stillbirth
19	Partial abruption	Good	24	990 gms.	2/8	Live, preterm
24	Premature labor, twins	Good	30	1300 gms.	7/8	Live
				1300 gms.	6/8	Live
27	Toxemia; hepatic and renal failure. Primary C-section	Expired	36	2500 gms.	9/9	Live

* Premature rupture of membranes.

Data

The Perinatal Intensive Care Team has made 100 runs by ground or air during the period from June 1974 through May 1975. Although statistical evaluation has not been done, the apparent results of the data are impressive and give support to the regionalization program as observed in the other states where the concept is functioning.[3]

The obstetric runs are tabulated in *Table I.* Three of the mothers transported were delivered at Wesley Medical Center during the June-May time period. All of the mothers were high risk. Two infants were stillbirths and two were term infants by weight. The rest were premature by weight but had good outcomes to date. There was one maternal death postpartum. This was secondary to toxemia, subsequent hepatic failure, and renal shutdown.

Evaluation of the obstetric history in the 100 neonates transported shows that 91 per cent of the mothers had at least one significant risk factor *(Table II)* that could be a diagnostic indicator for impending neonatal problems. Early recognition and maternal transport in some of these would have resulted in a better outcome.

Evaluation of the neonate by APGAR score is shown in *Table III.* The results of 100 transports show the APGAR score was recorded 74 per cent of the time at one minute and 67 per cent of the time at five minutes.

Table IV shows the percentage of survival compared to infant weight. Infants under 2,000 gm had a 65 per cent survival rate. The overall survival rate for 100 transported neonates was 74 per cent.

Table V demonstrates the gestational age of transported neonates.

The acceptance of the regional program is reflected by the frequency of referrals, number of communities utilizing the service and, the most important component of the system, the referring physician. *Table VI* indicates the designation of physicians making referrals. Family practitioners head the list with 56 of the referrals.

TABLE II
MATERNAL RISK FACTORS

Toxemia	16%
Diabetes	5%
PROM	14%
Abnormal delivery, *i.e.:*	
C-section	
Malpresentation	
Precipitous delivery	
Placenta previa	
Abruptio placenta	
3rd trimester bleeding	

TABLE III
APGAR EVALUATIONS—
100 TRANSPORTED NEONATES

APGAR	*1 Minute*	*5 Minute*
4	24	12
5-7	31	30
8-10	19	25
Unknown	26	33

TABLE IV
SURVIVAL BY WEIGHT

Weight	*Survived*	*Expired*	*Total*	*% Survival*
<1500	17	13	30	57
1500-2000	10	2	12	83
2001-2500	15	4	19	78
2501-3500	24	6	30	80
3501-4000	6	0	6	100
>4000	2	0	2	100
Unknown	—	1	1	—
<2000	27	15	42	64
>2000	47	11	58	81
Total Survival Rate 100 Transported Neonates June 1974-May 1975	74	26	100	74

TABLE V
GESTATIONAL AGE OF TRANSPORTED NEONATES

Weeks	*Number of Neonates*
28	11
30	23
34	45
34	55

TABLE VI
REFERRING PHYSICIANS

Family practice	56%
Pediatrician	29%
General surgery	11%
Obstetrician	4%

In the 100 referrals, the mobile unit has responded to 28 different Kansas communities.

The Future

As with all programs designed to give highly specialized care, the physicians, nurses, and auxiliary personnel dealing with patients must be kept abreast of advances in their field. An aggressive postgraduate educational program has great importance. Development of more outreach programs for nurses and physicians is needed. As personnel, equipment and facilities become available, education will assist in the development of more primary, secondary, and tertiary care centers.

Basic to regionalization is an adequate, efficient transport system. Although ground transport has been developed and used to date, air transport systems must be developed and used in the future for more distant areas. Finally, as with any specialized care system, adequate information must be obtained and evaluated to establish the effectiveness of the program. A state-wide data system is in the process of development. Success of the program will eventually be determined by a reduction in perinatal morbidity and mortality, and a decrease in the numbers of children afflicted with mental retardation.

Conclusion

The concept of Regionalization of Perinatal Care was begun in Kansas. As more data become available, it can be anticipated that the perinatal mortality rate will be reduced. The data evaluated from the first 100 runs shows that 91 per cent of mothers had a significant antepartum or intrapartum prognostic sign. This emphasized the importance of early identification of the high risk pregnancy. If indicated, the possibility of transport of the fetus in utero to a secondary or tertiary care center should be considered as "the mother's uterus is still the best transport incubator." Physician and community acceptance of the concept of regionalization has been good. The perinatal team greatly appreciates the progressive, cooperative involvement of the community physicians of Kansas in this first year of regionalization.

Acknowledgment

Maureen Clark, Pat Hume, and Ruth Smith assisted with the assembling of data and the preparation of this paper.

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The President's Message

Ed. Note: The Kansas Medical Society was asked to appear before the Special Legislative Committee on Health and Human Resources at its August 25 meeting, to respond to several questions on the subject of the role of government in the delivery and funding of health and environmental services. Printed below is the substance of the remarks made by Dr. John W. Travis, at that hearing.

Q. *What are the minimum health and environmental services which should be provided to citizens of Kansas by governmental entities?*

A. The Kansas Medical Society believes that a government derived from a free electorate and operated through a responsive bureaucracy at every level needs to direct its first attention toward establishing the standards for and assuring the maintenance of an environment for the life and work of Kansas citizens which supports a high standard of health. In the pursuit of that obligation in the area of health care, government should address first how it may best support scientifically based standards of education and competence among health professionals. The positive encouragement of excellence among health care institutions of all kinds and activities to promote rational development and distribution of facilities in cooperation with the voluntary sector can be one of government's most important functions in this area. The education of physicians, nurses, technologists, a variety of other health care-related professions, and adequate opportunities for education and specialization in environmental management need the continuing support of Kansas citizens and government at every level.

With a few special exceptions (immunization programs, maternal and child health programs for low income groups, etc.), personal health services requiring services of physicians and allied professionals should continue to be delivered in the voluntary sector. No matter its imperfections, the present "system" of private medical and health care in all its variations has served the need of our citizens far better than any alternative yet devised. Recent objective comparison studies with oft-admired state medical systems in several European countries are convincing on this point. The same conclusion is reached in any objective analysis of federal- or state-operated personal health care delivery programs in our own country.

Physicians and related health care professionals are deeply involved in the most rigorous programs of standards setting, surveillance of individual performance, and review of the prudent utilization of health care services ever undertaken. To superimpose or inject additional elements of governmental involvement at this time can serve only to entangle our medical care system in a web of rules and regulations through which the most energetic and original mind will not be able to penetrate. We stand already perilously close to an enervation and stupefaction of the medical profession and its companion disciplines by a possibly well-intended but often misconstructed flood of legislative and bureaucratic regulatory activity which threatens to drown us—and in the absence of any great public outcry for it!

Q. *How should the delivery of such "minimum services" be financed?*

A. The Kansas Medical Society believes that the voluntary health care insurance industry working with the group plan concept is best able to underwrite programs for the health service needs of the vast majority of Kansas citizens; this concept should be fundamental to any system of health care financing. At the same time, the insurance industry should be strongly encouraged to write at least a basic benefit structure which supports a rational approach to needed health care services and permits choice of site of delivery in accord with sound medical judgment. Specification and regulation of such basic benefit structures and related insurance premiums may well be a concern of government. A mixture of voluntary and government resources may be needed for some forms of catastrophic health service insurance and to provide benefits for all necessary health care to low income or destitute individuals. It is a fundamental tenet of the medical profession that ability to pay should not be the determinant of access to quality health care services. In former times, such services were often provided by physicians on their own initiative without charge; the need today for a more regularized and dependable mechanism for access to care is recognized by the Kansas Medical Society.

The Kansas Medical Society believes strongly that fee-for-service reimbursement for health care services provided to individuals represents the best approach to this segment of the problem of funding for health services. One source of mute testimony to this fact can

be found in the practice of local health departments and HEW of using some variation of fee-for-service in virtually all categorical health care programs administered by these agencies.

Those services which government provides to maintain a healthful environment for all citizens are appropriately funded by the taxation mechanism.

Finally, taxes or fees paid by health care professionals and institutions to establish and support state programs of professional credentialing, institutional standards and safety programs, etc., should be used solely to support such programs, and not diverted to other purposes.

Q. *How should minimum health and environmental services be delivered, i.e., through a county delivery system, a regional delivery system, a delivery system organized on the basis of cooperative agreements between counties, etc.?*

A. The Kansas Medical Society does not believe itself expert to comment on how all necessary environmental services might best be managed. However, retention of a significant element of local control and determination —in conformity with state-wide standards—would seem an appropriate and fundamental objective.

P.L. 93-641 mandates creation of an organization to oversee facilities and resources for the delivery of health care which is ostensibly intended to support local control in the rationalization of such resources and the adaptation of delivery of health care to local needs. If this system is permitted to develop in each area with a minimum of meddlesome interference, and there is no attempt to cannibalize or sequester it under the control of the bureaucracy, the true needs of each designated health service area may emerge as the controlling influence on development in that particular region, regardless of its geographic or jurisdictional extent—i.e., a single governmental entity, several counties, or half of the state. It remains to be seen whether the HSA system will work. In the meantime, it would be tantamount to foolishness to impose another system with different boundaries and different requirements which would have as its purpose the achievement of some or all of the same objectives.

The Kansas Medical Society is already hard at work in cooperation with local physicians, the Kansas Department of Health and Environment, and the University Medical Center to seek alternatives which will improve accessibility to health services in rural north-central Kansas, building on the existing resources.

Q. *What should be the relationship between the state and local governments and the private sector in delivering health and environmental services?*

A. The experience of the Kansas Medical Society in recent months indicates again how infrequently bureaucrats are willing to share the development of their grand designs with that segment of society, the design they are intended to embrace. It is, for instance, fatuous to plan for systems of health care delivery presuming that the last who should be consulted are physicians.

The report of this Special Committee will, we hope, express forcefully the absolute necessity for continuing consultation and cooperation among governmental administrators and regulators at all levels, the public, and —most especially—those professional groups whose ability to deliver the needed services at issue may be profoundly—even adversely—affected by bureaucratic decisions made from a single-minded or adversary posture.

The people of Kansas cannot afford the ambitions of public officials who would ignore or summarily dismiss the concerned opinions of an entire profession. The impact of such behavior by government officials on the goodwill and motivation of professionals cannot be lightly accounted.

We seek the support, understanding, and help of this Committee as we work to develop a stronger and more responsive Board of Healing Arts and to define the legal relationship of the grievance and censure process of the organized medical profession to the Board. Only in this way can the profession answer the public demand for a more meaningful surveillance of its practitioners.

This testimony by the Kansas Medical Society may be lacking in sufficient specific recommendations. However, we perceived the questions asked by the Committee to be sufficiently broad and complex as to require extended discussion and exchange well beyond our understanding of our role in the matter at this point in time. We have, therefore, tried to address some of the fundamental considerations which bear on each of the questions asked from the point of view of the primary providers of health services, leaving it to the wisdom of the Committee to admix our comments with other testimony received.

We hope that you will hear from other sources of the important role in public health education played by such voluntary agencies as the American Cancer Society, the Kansas Heart Association, the Kansas Lung Association and other similar organizations whose efforts the Kansas Medical Society heartily endorses.

Finally, it is important that the Committee know that Kansas physicians have goodwill for and good faith in the difficult deliberations which you are undertaking. Your charge is exceedingly broad. We ask to receive a copy of the Committee's preliminary report at the earliest convenient time for our study—and further comment, should you desire it.



The Relative Value Problem

It is characteristic of mankind that as it tries to resolve its problems, it makes them more complicated, thus assuring successive generations of having something to do. The ubiquitous matter of abortion, through a variety of legal, social, and medical maneuvers designed to bring it out of the closet of illegitimacy, is consequently assured of a prominent place on our social agenda for some time to come. It was easier in the old days, when the legal restrictions were so severe the physician rarely had to confront (publicly, at least) the moral and ethical issues. There were bad abortionists (who did a bad job) and were loudly and officially condemned. There were good abortionists (who did a good job) and were quietly and unofficially ignored. But the direction of the social current in recent years has been toward making abortion respectable and available, and the advocates and opponents have applied themselves with vigor.

Anyone commenting on the subject of abortion soon exposes his position, so let it be noted that this is written from the personal attitude that abortion is a form of medical therapy to be used in accordance with established principles: correct and complete diagnosis, selection as the optimum therapy, and accomplishment in appropriate time and place with proper aftercare. This does not go to the extreme of "abortion on demand" and does not, therefore, satisfy our more liberal colleagues. It recognizes that abortion is a reasonable and proper procedure in certain cases (the moral issue not being ignored but being incorporated into the medical decision) and, therefore, does not satisfy our more conservative colleagues. We presume that this failure to satisfy either extreme must denote some validity in our position.

Let it also be noted that no one knows when or how the intermingling of DNA molecules in what we term conception takes on identity, personality, soul, or whatever term one wishes to apply to that ineffable quality which is presumed to distinguish the human animal from the lesser versions. There are numerous opinions, sincere in character and vigorous in exposition, but spiritual in concept and therefore not amenable to dispassionate analysis. For all the sincerity and vigor, no one knows.

But as the confrontation between the proabortionists and the antiabortionists has developed, the rhetoric has taken on an inevitable stridency. The antiabortionists have assumed a holier-than-thou attitude reflecting their conviction that they have a direct line to the Almighty. The proabortionists have countered with a wiser-than-thou attitude reflecting *their* conviction that the Almighty has a direct line to *them*. The unfortunate result is that the valid medical elements become obscured, making it more difficult to resolve the medical action, the social impact, and the ethical implications.

Abortion on demand (without appropriate medical indication) is not medically tenable, since it is not a medical decision and subverts the physician to the role of a mechanic as his professional acumen is not a contributor to the decision. Much is heard in these days of liberated womanhood (you should forgive the sexist phrase) that obtaining an abortion is an expression of a woman's basic freedom to do as she wishes with her body. The fallacy lies in the fact that in exercising her "freedom," she is imposing her interests on others who must participate in the process, and what of their rights and freedom? It is time to stop talking about our freedoms, until we start accepting that for each there is a concomitant and governing responsibility which must be satisfied if the freedom is to have substance and benefit. Abortion as a method of birth control—whether the pregnancy is legitimate or illegitimate—is cumbersome, inefficient, and expensive. *A priori* contraception can be a medical necessity and a social necessity as well, but to burden the medical profession with the obligation to eliminate the social mistake is a misuse of its time and energy. The problems which beset the profession today are largely those in which social elements infiltrate the medical elements and the physician must be constantly alert as to which area he is serving. The ethical features of abortion have, of course, come into closer scrutiny since the legal restrictions have been lifted. Permission

is not stated so much as implied by the absence of prohibition. There is, quite properly, no social or legal requirement that abortion be performed and the medical interpretation must remain dominant.

If we are unable to make all people of one mind, we can at least examine some of the effects of the recent changes. In 1973, the most recent year for which figures are complete, the number of legal abortions has been variously reported as 615,800 (Institute of Medicine) and 745,400 (National Academy of Sciences.) The antiabortionists would cite this as the number of lives lost, even "murdered," in some of their more emotionalized presentations. (Can anyone doubt that Dr. Edelin's conviction related to the abortion aspect of his action, rather than the "manslaughter" of which he was convicted to the court's evident amazement?) Such figures, however, require some adjustment. First, a certain number of these pregnancies would have ended in spontaneous abortion or fetal or neonatal death from inherent defects. Furthermore, this number includes those pregnancies which would have been terminated by illegitimate abortion under the former restrictions. We have no accurate figures on how many illegal abortions actually took place in former times, but studies have indicated that 70 per cent of the women having legal abortions in 1973 would have sought them even had they still been illegal. The point could be made, therefore, that only 30 per cent of the legal abortions are the result of the relaxed restrictions. (And it can be noted that there are still some illegitimate abortions in areas where some local situation prevents use of legitimate channels.) In the light of such observations, the reported abortion rate for 1973, of almost one in every five pregnancies, takes on a somewhat different aspect. Even so, the antiabortionists consider the question of "benefits" of abortion to be moot since the price of such benefits is too high and assessed to the wrong individual.

At the same time, if there are moral and ethical considerations that speak against *any* abortion, can the physician ignore the moral and ethical features that warrant consideration of abortion rather than its rejection out of hand? Again, it has been reported that the rate of hospital admissions for septic or incomplete abortions was reduced by half from 1969 to 1973. The social, economic, emotional, and future reproductive implications of this cannot be ignored. Maternal deaths known to be related to abortion dropped from 128 in 1970, to 47 in 1973. These are benefits which can be related directly to the performance of abortions under proper medical control, whatever one's personal attitude toward the moral and ethical features. And there are other imponderables: the avoidance of children destined for the traumatic world of the unwanted, the reduction of the abnormal gene pool through the elimination of the affected organism, the accessory benefits to the families of the patients (whether the high-risk teenager unequipped to handle her situation or the high-risk multipara unable to meet her domestic responsibilities).

Once again, in the continuing struggle to elevate mankind, the opposing forces both presume to serve its interests. Each is right but not so right as it thinks. Although abortion has gained broader acceptance in these last few years, it will continue in a state of flux. But total permission is as mindless as total prohibition, whatever the consideration. This flowing tide will ebb to some extent, no doubt, but the shoreline will never be quite the same. Meantime, the physician must ponder the question which will remain: where does the medical indication leave off and the social effort begin?—*D.E.G.*

NOTICE

On Saturday, October 18, 1975, the second annual Physician-Community Awareness Day Conference will be held in Wichita. This year's conference has been expanded significantly and is supported by the Kansas Medical Society, the WSU Branch of the University of Kansas School of Medicine, Wesley Medical Center, St. Francis Hospital, St. Joseph's Hospital, and the Medical Society of Sedgwick County.

The theme of the conference, to be carried out through various workshop sessions, will be the problems relating to recruiting primary care physicians for rural communities. It is anticipated that over 200 individuals will attend. For further information, contact:

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Professional Liability Legislation Proposals

Ed. Note: The following proposals were prepared by Dr. M. Martin Halley and the Commission on Professional Liability and Medico-Legal Affairs. They represent the substance of the KMS legislative program, and were presented before the Special Legislative Committee on Medical Malpractice.

1. Introduction: Comprehensive Legislation Is Essential

The Kansas Medical Society supports a legislative proposal based upon the premise that the highest quality of health care for consumers will be provided by comprehensive remedial legislation aimed at total correction of the entire malpractice problem. Under this proposal, patients will be assured the highest quality of health care, will be protected from injury, and will be expeditiously and fairly compensated when injury does occur. Additionally, implementation of this comprehensive program will have a salutory effect on health care costs, will be instrumental in the prevention of health care crises as have occurred in other states, and will improve the general climate of health care delivery so that providers will be able to concentrate on the delivery of care to patients without the constant distractions of vexatious malpractice claims. The proposed legislation is discussed in general terms in these notes, which will be followed at a later date by more detailed recommendations.

The comprehensive legislative proposal provides for the patient a *quid pro quo* on an item-for-item basis, and can truly be considered a consumers' bill. It will exert stabilizing effects upon medical practice, hospital practice, other health care providers, the insurance industry and the legal profession, and will promote their effective interaction in the best interest of the patient. Whereas the proposal places a limit on the total amount of recovery in a malpractice action, and also shortens the statute of limitations, it is submitted that there is substantial, more than adequate consideration for these changes in the form of benefits for the public, for the health care environment, and provided for patients with claims for injury, benefits which would not otherwise be available. The following benefits to the public, to health care practices, and to potential malpractice claimants are provided in this proposal.

2. Medical Review Panels

The proposal provides for mandatory review panels composed of three qualified physicians or other providers chaired by an attorney, selected by the parties to a controversy. This panel will evaluate the medical issues and causation of any malpractice claim, and will make specific recommendations to the parties and to the district court. The findings of the panel should be admissible in evidence, and panel members will subsequently be available as expert witnesses. All qualified physicians in Kansas and other qualified health care providers will be available for this service on an appropriate rotational basis.

Comment: This panel system represents a major step forward in the expeditious settlement of most claims and in the expeditious adjudication of the small number that would go to trial. It also represents a most substantial benefit to the public in terms of the major commitment by the involved professionals. The panel will assure claimants with meritorious claims a fair settlement without the uncertainties of a long trial, will generally expedite the legal process, will obviate the legal profession's problem of unavailability of medical witnesses, and will increase a claimant's final recovery by diminishing the expense of prolonged litigation.

3. Financial Responsibility and Limitation of Liability

All health care providers must, to qualify under the proposal, show financial responsibility by carrying a minimum of $100,000 in liability insurance. The proposal provides the guarantee of financial responsibility to a second level by providing for awards of an additional $150,000 from a Patients' Compensation Fund. A third level, of yet another $250,000, is available from the Patients' Compensation Fund as catastrophic loss compensation for special situations. This catastrophic compensation contemplates periodic payments to the injured party, over a period of years, under court supervision, with termination of benefits in the event of recovery or death of the claimant.

The individual liability of each qualified health care provider is limited to $100,000. The total amount of recovery for the death or injury of a claimant may not exceed $500,000.

Comment: The proposal thus provides for guaranteed financial responsibility of each provider to the individual limit of $100,000, and to the total limit of $500,000, a sum that is considerably in excess of insurance limits carried by many providers at present. This sum is potentially available to each claimant, and is far greater

in amount than the vast majority of malpractice awards. The limitation of liability, through the Patients' Compensation Fund financed by health care providers, together with the individual provider limit, will stabilize the presently precarious liability insurance market. It will contain costs and assure the continued availability of insurance to providers. It will therefore provide uninterrupted care to patients, as well as fair payment to claimants. The proposal actually provides for increased payment to the injured claimant at all levels, since the attorneys' share of the award is decreased by a modification of the contingent fee arrangement.

4. Patients' Compensation Fund

The proposal creates a Patients' Compensation Fund, administered by the insurance commissioner. The fund will be maintained at an appropriate level through annual assessments against qualified health care providers, computed as a percentage of the providers' basic insurance premiums, with a provision for additional assessments if necessary. An ongoing and substantial source for payment of meritorious malpractice judgments and settlements up to the total award limit of $500,000 each is thus guaranteed.

Comment: The benefits of the Patients' Compensation Fund to the public are guaranteed financial responsibility of providers, assurance of a source for fair payments to injured patients, insurance market stabilization, cost containment, uninterrupted availability of health care, and improvement in the general health care environment. Reciprocal provider benefits also result from these factors. Total costs for providers should not be adversely affected, since basic premium rates should respond favorably, and excess coverage should no longer be necessary. The feasibility of maintaining the funds depends, however, upon the establishment of a total award limitation, as discussed in Section 3.

5. Collateral Source Rule

The proposal provides that the collateral source rule shall be changed so that evidence of other payments to the claimant or benefits received from other sources may be admitted.

Comments: Each deserving injured patient should be made whole, and is reasonably entitled to one recovery for his injury. The collateral source rule, when applied, prevents consideration of other benefits and services received by the claimant for his injuries in determining an award, so that an injured party may be reimbursed several times for his economic loss. Elimination of this rule will not be unfair to the injured patient, and will benefit others, since such action will contain costs, will protect providers' insurance coverage, and will help assure the stability of the Patients' Compensation Fund by preventing unnecessary and excessive payments.

6. Modification of Attorney Fees

The proposal modifies the amount an attorney can charge for his services in malpractice controversies. The following sliding scale is proposed as maximum permissible charges: 50 per cent of the first $1,000 recovered; 40 per cent of the next $2,000 recovered; 33⅓ per cent of the next $47,000 recovered; 20 per cent of the next $50,000 recovered; 10 per cent of the next $150,000 recovered; 5 per cent of the next $250,000 from the catastrophic fund.

Comment: This modification of contingent fee payments received by the attorney will increase the amount of the malpractice insurance dollar actually received by the injured patient, and will result in substantial savings for medically injured individuals. On the other hand, the proposed scale continues to provide adequate compensation for attorneys and will, therefore, not result in unavailability of counsel for injured patients.

7. Statute of Limitations

The proposal establishes the time for the bringing of an action at two years from the date of the alleged act, omission, or neglect, except that a minor under the age of 6 years shall have until his eighth birthday to file an action. The section applies to all persons regardless of minority or other legal disability.

Comment: Present unreasonable statutes of limitations have placed an undue burden on health care providers and upon the insurance industry, and have adversely affected health care delivery and availability. They have been a factor in the present crisis in medical liability insurance, marked by dramatic increases in insurance premiums for physicians and hospitals, unavailability of insurance, and withdrawal of insurers from the market. The "long tail" of malpractice claims, made possible by present statutes, as well as by application of the discovery rule to further lengthen the permissible time for filing claims, has created actuarial impossibilities for insurers with resulting undesirable effect upon health care practices. The proposed two-year statute would speed up the investigation and disposition of claims, eliminate strategic and other dilatory delays, and remove a major unsettling factor from health care costs and environment. Even for minors, two years after the age of 6 years appears reasonable, since injuries resulting from health care can be expected to be apparent within two years after the child's leaving the parental, preschool environment.

This modification of the statute of limitations is absolutely essential in order to avoid serious availability problems for individual providers' insurance, as well as for the successful function of the proposed Patients' Compensation Fund.

8. Reporting of Malpractice Claims

The proposal requires the reporting of all malpractice claims to the insurance commissioner for compilation of the statistical data necessary for actuarial evaluation and detailed claims analysis. All claims will also be reported to the licensing authorities for evaluation as discussed in Section 9.

Comment: The unavailability of detailed data relative to malpractice claims has seriously impeded objective identification of problems in the past. Additionally, insurance companies have experienced problems in rate making and the commissioner has not always been able to easily obtain data necessary for proper supervision. The provisions of this proposal enable the accumulation of meaningful data, so that critical areas can be analyzed, and corrective action taken. This provision further adds stability to the professional liability insurance market, through the avoidance of excessive rates based on insurers' experiences in other geographic areas.

9. Quality Assurance for Health Care Delivery

The proposal provides for peer review of all malpractice claims through the mechanism of the mandatory medical review panels, which must promptly evaluate all claims. All malpractice claims must subsequently be reported to the appropriate licensing authorities for the evaluation of provider competence and possible appropriate action based on Kansas law. The proposal requires providers to submit proof of having satisfied a continuing education requirement for the annual re-registration of their licenses to practice in Kansas. The proposal encourages increased emphasis on patient grievance identification procedures and the intensification of patient injury prevention programs throughout the health care industry.

Finally, the proposal will give the licensing authority power to limit practitioner licenses, as well as to suspend or revoke, for incapacity of the practitioners in addition to previously existing grounds. Such licenses may be reinstated or restrictions removed following a showing of practitioner rehabilitation.

Comment: Patient injury, or adverse results of treatment, real or imagined, have been identified as the primary causes of the malpractice problem, and are increasing as the volume and complexity of health care increases. Many such incidents are unavoidable—short of the termination of medical practice—since they result from human error, unavoidable treatment complications, and health care accidents, occurring in spite of the efforts, judgment and skill of well-trained, competent practitioners. Further education, more review of medical procedures, or greater control of providers cannot therefore provide a solution to the malpractice problem. Nevertheless, programs in this area—long an integral part of medical practice—must be intensified and extended so that patient injuries may be effectively minimized and the public can be assured that the highest possible quality of care is delivered in Kansas.

10. Peer Review Immunity

The proposal grants medical review panel members immunity from civil liability for all communication, findings, opinions, and conclusions made in the course and scope of their duties.

Comment: This provision enhances and facilitates the functions of the panel, and assures objective evaluation and reporting of incidents. The panel mechanism would be seriously impaired without such provisions.

11. Guarantee of Insurance

The proposal attempts to provide a source of liability insurance for every competent, qualified provider. It contains a risk management plan under which a provider who cannot acquire insurance through conventional channels, or whose liability insurance is not renewed or is cancelled, may be assigned to an insurer by the commissioner of insurance.

Comment: Medical practice cannot continue without adequate liability insurance. This provision further assures that all competent Kansas physicians and other providers will continue to be available to provide uninterrupted service to their patients.

12. Burden of Proof

The proposal provides that expert medical testimony shall be required in medical malpractice controversies to establish alleged deviations from the accepted standard of care, except in the following circumstances in the discretion of the trial court: (1) A foreign substance, other than medication, repair material, suture material, or a prosthetic device, is unintentionally left within a patient's body after surgery; (2) a health care procedure is performed on the wrong patient; (3) an injury is inflicted on a healthy part of a patient's body not directly involved in the health care procedure or proximate thereto.

Comment: This section explains and clarifies the doctrine of *res ipsa loquitur* as it applies to medical controversies.

This doctrine shifts the burden of proceeding with evidentiary explanations to the defendant in certain instances, and has been extended by the courts in some jurisdictions in order to attain "social equity" in compensating certain patients from the deep pockets of private insurance companies. A clear presentation of the application of this legal theory appears beneficial for all concerned parties. This will improve the overall legal environment for patients and providers, and will contribute to the stability of the insurance market and the Patients' Compensation Fund.

13. Informed Consent

The proposal provides that a written document, in a prescribed form, signed by the patient or his representative, shall be conclusive as to all matters of consent to a health care procedure, unless clear and convincing evidence is introduced that the writing was fraudulently obtained. The writing acknowledges that satisfactory disclosures have been made, that all questions about the proposed procedure or treatment have been answered, and that no additional information is desired. The proposal further provides that nothing therein shall be construed to require any health care provider to obtain a patient's signature on such a writing before proceeding with any health care procedure, and that nothing therein shall invalidate any consent otherwise valid under the law.

Comment: The doctrine of informed consent, which requires adequate disclosures to patients, is based upon the fiduciary aspects of the physician-patient relationship and upon the right of each individual to the physical security and integrity of his body. It has been a source of continuing confusion to the medical profession and to patients, and has been steadily expanded in some jurisdictions. The doctrine has been a major factor in malpractice controversies, and through retrospective application and difficulties of documentation has created problems which emphasize the need for clarification. Significant benefits to the public can be expected from thus assuring reasonable and adequate disclosures to patients. Improvement in patient-physician relations, and reduction of consent controversies will result as well as beneficial effects upon the health care environment.

14. Punitive Damages

The proposal provides that no punitive damages shall be recoverable in a medical malpractice action brought against a properly qualified health care provider.

Comment: The request for this type of compensation is inappropriate to medical malpractice controversies, but has occurred increasingly as part of the plaintiff attorney's strategy. The demand for punitive damages drives a wedge between the defendant and his insurance company, and results in harassment of the defendant to the extent of forcing the consideration of settlement terms not otherwise attainable. It appears reasonable to eliminate this item, so that legal process may no longer be used to attain ends not intended in its purpose.

15. Breach of Contract

The proposal provides that no liability shall be imposed upon any health care provider on the basis of an alleged breach of contract, express or implied, or on the basis of an alleged oral guarantee of a result, unless such contract or guarantee is expressly set forth in writing and appropriately signed.

Comment: The allegation of oral contracts or guarantees by some claimants has been a source of confusion and bad relations. It appears reasonable that any such assurances should be made in writing so that future misunderstandings may be avoided. This provision will have a beneficial effect upon the overall health care environment, costs, individual provider's insurance, and upon the Patients' Compensation Fund.

16. Ad Damnum Clause

The proposal provides that no dollar amount or figure shall be included in the demand in any malpractice complaint and that the prayer shall be for such damages as are reasonable in the premises.

Comment: The elimination of the dollar amount from *ad damnum* clauses will eliminate the substantial prejudicial publicity relative to large dollar demands which are often publicized in the various news media. The subsequent smaller settlements never receive the same type of publicity. It is felt that this will be most beneficial to the entire health care situation and will serve to decrease the number of claims to the extent that these are incited by this type of publicity.

17. Arbitration of Disputes

The proposal provides that the Uniform Arbitration Act in Kansas be amended so as to permit agreement to arbitrate malpractice incidents which might occur in the future.

Comment: The arbitration option is an important one since this type of forum should expedite certain types of claim determinations and, therefore, decrease the costs. The present Kansas law permits agreements to arbitrate existing tort actions, but does not permit an agreement to arbitrate a claim in tort thereafter arising between the parties. It is felt that such amendment of existing law will be beneficial for all parties to any medical malpractice controversy.

18. The Good Samaritan Principle for Emergency Care in Hospitals and Elsewhere

The proposal provides that the present Kansas Good Samaritan Act be amended so that physicians and other professions who render emergency assistance to patients with whom they have no physician-patient relationship shall not be held liable for any civil damages other than damages occasioned by gross negligence or by willful and wanton acts or omissions.

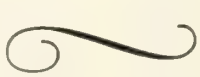
Comment: The present Kansas Good Samaritan Act provides qualified immunity only for those practitioners who render emergency care at the scene of an emergency or accident. It specifically applies the ordinary standards of negligence to emergencies occurring in hospitals and elsewhere. It is felt that assistance at the increasing number of hospital emergencies as well as emergencies occurring elsewhere should be encouraged and that, therefore, qualified immunity should be available. Patient benefits will obviously accrue if health care providers are not discouraged by the threat of potential legal problems from providing emergency services in situations where no obligation on their part exists.

19. Study Commission for Professional Liability

The proposal provides for the creation of a study commission functioning at the state level, and appointed by the governor, consisting of the insurance commissioner, legislators, providers, consumers, and others. The commission will review all aspects of the malpractice situation on a continuing basis, will evaluate data, and make recommendations for necessary changes. The commission will also address itself to the formulation of uniform guidelines for patient compensation, and to the establishment of a pilot program for no-fault medical injury compensation in the event that modifications of procedural law previously requested do not prove successful.

20. Conclusion: A Program for Total Correction

The comprehensive legislative proposal supported by the Kansas Medical Society will provide a remedy for an impending health care crisis before such a crisis actually occurs. It will do so through the mechanisms outlined above which emphasize total correction rather than palliative, symptomatic relief. It will assure the highest quality of care, prevent injuries to patients, and compensate patients fairly and expeditiously when injury does occur. These and other significant benefits involving the health care environment, health care costs, and liability insurance will be accomplished as follows: (1) Medical review panels of competent physicians or other providers will evaluate and expedite malpractice claims; (2) Qualified health care providers will be financially responsible to the individual limit of $100,000 through private insurance, and to the total limit of $500,000 through the Patients' Compensation Fund. These limits are well above the vast majority of malpractice awards; (3) A reasonable time limitation for the filing of malpractice actions will eliminate the devastating effects of the "long tail" of present malpractice claims and bring about speedier compensation for meritorious claims; (4) Insurance market stabilization will result from the shortened statute of limitations, the limitation of individual provider liability, and the Patients' Compensation Fund which will be financed by health care providers; (5) A much higher percentage of an award recovered for an injury will accrue to the injured patient, rather than being dissipated in legal expenses or unreasonable attorneys' fees; (6) Intensified quality controls of health care practices will consist of peer review procedures, recredentialing of health care providers on the basis of proof of participation in continuing education programs, evaluation of malpractice claims by licensing authorities, provision for patient injury prevention, and grievance identification programs; (7) General improvement of the health care environment will result in stronger provider-patient relationships, improved patient care, and minimization of costly, undesirable defensive practices; (8) The study commission will monitor the entire situation on a continuing basis, and recommend changes if necessary.



Council Meeting

Report of Meeting Held May 7, 1975

A meeting of the Council was held at 12:30 P.M., immediately after the conclusion of the House of Delegates on Wednesday, May 7, 1975, at the Glenwood Manor Motor Hotel, Overland Park. Dr. John W. Travis, President, called the Council to order.

Present were the following officers and councilors: Drs. Lewis G. Allen, Royal A. Barker, F. Calvin Bigler, John N. Blank, Kenneth M. Boese, Edward G. Campbell, Francis T. Collins, Clair C. Conard, Galen W. Fields, Vernon W. Filley, Phillip A. Godwin, Robert P. Hudson, John D. Huff, M. Robert Knapp, Glenn Madsen, Wendale E. McAllaster, Richard Meidinger, Warren E. Meyer, Donald R. Pierce, George W. Pogson, Ivan E. Rhodes, John W. Travis, Wayne O. Wallace, Kermit G. Wedel, Evan R. Williams, and Emerson D. Yoder. Also present were Messrs. Gary Caruthers, Oliver E. Ebel, Gary W. Rexford, and Jerry Slaughter.

Dr. Gregg M. Snyder, Chairman of the Commission on Professional Liability and Medico-Legal Affairs, presented a report followed by much discussion on the upcoming activities of this Commission. A timetable of action and budget will be prepared and submitted to the Executive Committee.

The 1976 Nominating Committee was appointed as follows: Drs. John N. Blank, Chairman; Herman W. Hiesterman, Ivan E. Rhodes, Thomas F. Taylor, and Evan R. Williams.

The Council voted to discontinue the present program of public information.

Reappointed to serve three-year terms on the Editorial Board were Drs. Donald R. Pierce and David E. Gray. Dr. Gray was also reappointed for another year as Editor.

The Council recommends the establishment of the sections on Neurology and Nuclear Medicine. This will be presented to the House of Delegates at its interim session next fall.

Dr. Travis announced the retirement of Mr. Ebel, effective June 1, 1975. Mr. Ebel will retain the title of Director Emeritus, but will receive no salary.

The Council then approved the employment of Mr. Jerry Slaughter as the Executive Director, effective June 1, 1975.

Dr. Travis announced the formation of the Committee on Finance and Personnel, to be chaired by Dr. Edward G. Campbell. This committee will be charged with the duties of reviewing the salaries of the secretarial staff.

The President announced the following names had been submitted to the Governor for possible appointment to the Healing Arts Board: Drs. John N. Blank, Kenneth L. Graham, and William C. Swisher.

The Council selected Lawrence as the site for the fall meeting of the House of Delegates in 1975.

Report of Meeting Held July 20, 1975

The Council met on Sunday, July 20, 1975, at the Atchison Country Club, Atchison, at 1:00 P.M. Dr. John W. Travis, President, called the meeting to order.

Present were the following officers and councilors: Drs. F. Calvin Bigler, John N. Blank, Clair C. Conard, John D. Huff, John B. Jarrott, Richard Meidinger, Warren E. Meyer, Richard H. O'Donnell, Donald R. Pierce, Donald J. Smith, Thomas F. Taylor, John W. Travis, Roger D. Warren, Kermit G. Wedel, and Emerson D. Yoder.

Also present were Drs. Frank K. Bosse, Charles S. Brady, Robert O. Brown, Richard L. Brownrigg, Thomas P. Butcher, Jack R. Cooper, L. M. Culp, Glen E. Eaton, Richard M. Glover, Lawrence E. Hart, P. H. Hostetter, Cecil Hunnicutt, H. Ivor Jones, Herbert Klemmer, Ronald D. Linhardt, James Loeffler, DeWitt S. Lowe, Hugh S. Mathewson, Gerald L. Mowry, Charles Pokorny, Ralph R. Reed, Jesse D. Rising, Daniel K. Roberts, Bill Roy, John A. Segerson, Gregg M. Snyder, Wayne O. Wallace, Wayne O. Wallace, Jr., Edwin T. Wulff, and Theodore E. Young. Also present was JoAnn Klemmer.

Also present were Gary Caruthers and Jerry Slaughter.

A welcome was extended to the physician guests of Council District 1, and the commission and committee chairmen present.

The Council next approved the actions of the Executive Committee at meetings of May 29, June 27, and July 20, 1975, as follows:

—The Fall House of Delegates will meet in Wichita, on Sunday, November 16, 1975, preceded by a physician-legislator seminar on November 14-15.

—Val Braun will assume the duties of Executive Assistant, in addition to her duties as Managing Editor of the JOURNAL, as of August 1, 1975.

—The Committee on Finances and Personnel, with the assistance of Mr. Slaughter, will determine the salary increases for the secretarial staff.

—The Blue Shield Affairs Committee, which will act as the liaison with Blue Shield and will observe at all Blue Shield Executive Committee meetings, was appointed as follows: Dr. Newman V. Treger, Topeka, Chairman; Drs. Richard Conard, Emporia, and Alex Scott, Junction City.

—A contribution of $250 to the Kansas State Nurses Association for administrative expenses incurred by the Joint Practice Committee was approved.

—Future supplemental payments to the Woman's Auxiliary, for expenses incurred on behalf of professional liability work with the Kansas Medical Society, were endorsed.

—The installation of an additional telephone line in the Executive Office was approved.

The Committee on the Disabled Physician was appointed, with Dr. H. Ivor Jones, of Prairie Village, as chairman. The purpose of the committee is to do research and prepare a draft for a legislative proposal that deals with the physicians disabled through physical or mental impairment, alcohol, or drug abuse.

Doctor Snyder, Chairman of the Commission on Professional Liability, presented a progress report of his commission on preparing several legislative proposals. He then introduced Mr. Don Jones and Mr. Don Anderson, of the St. Paul Fire and Marine Insurance Company, who discussed the "claims-made" type of insurance policy.

Dr. Norton L. Francis, Wichita, was appointed temporary Chairman of KaMPAC, during the reorganization of the Board of Directors.

Doctor Taylor, chairman of the Health Resources Planning Committee, presented a report on HSA development in the state. He then introduced Doctor Brownrigg, of Dodge City, who described the activities and progress in Area 1.

Doctor Rising reported that his accrediting committees had started visiting and reviewing institutional continuing education programs for possible accreditation. He urged those physicians with questions to contact Mr. Gary Caruthers, at the Executive Office.

The calendar of meetings for the coming year was distributed. The next Council meeting will be held on Sunday, October 19, 1975, in Manhattan.

Interim Session

of the

KMS HOUSE OF DELEGATES

Sunday, November 16, 1975–9:00 A.M.

Hilton Inn, Wichita

One-day business meeting to consider items relating to legislation and others that cannot be delayed until May. It is hoped all component societies will be represented by their full complement of delegates.

All members of the Society are invited.

ALL RESOLUTIONS MUST BE SUBMITTED TO THE KANSAS MEDICAL SOCIETY NOT LATER THAN OCTOBER 15, 1975. THEY WILL BE REPRODUCED IN SUFFICIENT QUANTITY TO PASS OUT TO THE DELEGATES AT THE MEETING.

Definitions:

Physician's Assistant, Nurse Practitioner, Nurse Clinician, Clinical Specialist

(NOTE: The Joint Practice Commission of the Kansas Medical Society and the Kansas State Nurses Association has developed and reviewed the following definitions, and submits them to you for your comments and thoughts. Additionally, the JPC is contemplating a statewide meeting of interested physician-nurse teams to discuss the many areas of concern to the professions.

If your nurse works with you in an expanded role, or if you have comments on joint practice, please let us know. Please address your responses to: Joint Practice Committee, The Kansas Medical Society, 1300 Topeka Ave., Topeka, Kansas 66612.)

Physician's Assistant

Type A

Qualified to act as a primary patient contact, collect historical and physical data, pursue positive findings to an appropriate depth, and then organize and report the data in a manner that enables the physician to visualize the problem and determine the next appropriate steps. He/she can also perform diagnostic and therapeutic procedures specified by the physician and coordinate the roles of other more technical assistants.

This type of assistant might be allowed to perform in settings apart from the direct supervision of the physician, provided the limits on his autonomous activity were clearly defined—such as which conditions or findings required the direct attention of the physician.

Type B

May be characterized as the "assistant specialist." His/her functions are concentrated on a narrower range of knowledge and action but within a limited area, the depth of his training and skill are surpassed only by the M.D. specialist whom he serves. *His usefulness is limited in primary care settings.* His range of independent action is limited, but in his special function, his skill may exceed that of the average physician.

Type C

Resembles the Type A assistant in the range of supporting services he/she would provide in a primary care setting but formal training is more limited in the depth and breadth of theoretical and factual base. This type of assistant would work under the close and direct supervision of the physician. Under these circumstances he/she might provide as much support as the Type A assistant in performing a variety of specific tasks with proficiency, but he would be incapable of performing independently and away from the surveillance of the physician.

Nurse Practitioner

The Nurse Practitioner is a registered nurse prepared through a baccalaureate program in nursing or by formal continuing educational programs which adhere to ANA approved guidelines. These programs will educate the practitioner in physical and psychosocial assessment and the use of appropriate laboratory and diagnostic tests to determine the health-illness status of individuals, families, and groups in a variety of settings. From this assessment, they will be able to initiate nursing therapies which include health teaching, counseling, anticipatory guidance, implementing medical therapies, preventive physical care, and articulating nursing therapies with other planned therapies. He may also make referrals to other appropriate health care providers, and/or consult the physician for further definitive therapy.

The focus of the practitioner role is the individual person and a majority of his time will be spent in clinical practice. The basis for judgments by the Nurse Practitioner is his individual knowledge and consultation with members of the medical team.

Nurse Clinician

The Nurse Clinician is a registered nurse who holds a master's degree in nursing with an emphasis in clinical nursing. Through the master's program, the Nurse Clinician develops advanced skills in assessment of physical and psychosocial health illness status of individuals, families and groups, and in the techniques of interviewing, counseling, and health education.

In addition, he will demonstrate an understanding of nursing theories and a knowledge of basic research. The application of this knowledge will allow the Nurse Clinician to promote and participate in research for the improvement of a patient care and health care delivery systems. The Clinician will be equipped to function independently in health education, health promotion, health maintenance, counseling, anticipatory guidance, and preventive physical care with other health team members.

(Continued on next page)

P.L. 92-603—A Clean Bill of Health?

Due to the fact that any health bill passed by the Congress has certain sections which are clearly not in concert with the thinking of the practicing physician, I have chosen this month to appraise my readers (all seven of you) of the progress of the KFMC in implementing P.L. 92-603 (PSRO).

In February of this year, we submitted our draft plan for Conditional PSRO status to the Bureau of Quality Assurance (BQA). After a wait of over three months, we received comments from BQA relative to our Conditional draft. The suggestions from BQA spoke about the changes we must make in our bylaws in order to comply with federal regulations on PSRO implementation. The changes recommended by BQA were, for the most part, not as severe as expected. In view of that, the Board of Directors of the KFMC voted to make the suggested changes, except for the following:

1. BQA recommended that we reduce the size of our Board of Directors from 31 to 21 members or less.

The KFMC Board recommended that no change be made due to the fact that Kansas covers a large geographic area, and we feel justified in having 31 members in order to assure adequate representation of the membership.

2. BQA recommended that our bylaws be changed to state that the Board may terminate a physician's membership in the PSRO *only* for failure to perform professional activities in the area, or for a loss of license to practice.

The Board recommended that no change be made because our present Article XII of the bylaws speaks very well to the subject of disciplinary action, and failure to perform activities in an area or loss of license should not be the only reasons for termination of a physician's membership in the PSRO.

We propose to stand fast on these two issues, and future articles in the JOURNAL will advise you of our success, or lack of it.—*J.E.A.*

Definitions

(Continued from page 221)

In the interdependent role, he functions as a coordinator of all therapies initiated for the patient as well as initiating his own. Consultation with and referral to other health care providers or agencies will be made as appropriate.

Since the focus is clinical practice, he ceases to be recognized as a Nurse Clinician if he fails to maintain active clinical practice for 40-50 per cent of the time.

Clinical Specialist

The Clinical Specialist is a registered nurse (prepared at any level) who in addition has completed either a master's degree in a clinical nursing speciality or who has a minimum of two years in-depth experience in a specialized field. He possesses a high degree of knowledge, skill, and competence within a narrow specialized area. He may function in a variety of health care settings. The Clinical Specialist would assess through a variety of tools such as history, physical examination, and appropriate laboratory or diagnostic tests. From this assessment, he will initiate nursing therapies which include health teaching, counseling, anticipatory guidance, implementing medical therapies, preventive physical care, articulating nursing therapies with other planned therapies, and/or making appropriate referrals.

The Clinical Specialist should also be involved in identifying clinical nursing problems and initiating and/or participating in research on these problems.

With the individual person as his focus, a majority of his time will be spent in clinical practice.

Vox Dox

Dear Vox Dox:

Time moves faster than we anticipated and, to many of us, is accelerating quite rapidly as 1976 and the first mandatory recertification examination in medical history —that of the American Board of Family Practice— approaches. To those who are scheduled to participate in this historic event, the prospect may seem a bit grim. In truth, the eventual satisfaction of having contributed to a major occurrence in the history of medicine will far outweigh the anxieties and efforts involved in preparation for and participation in recertification.

Before pursuing this point further, it is best that I review, briefly, the real purpose of Board Certification in an area of medicine. In spite of the misuse and abuse of the concept of board certification in granting hospital privileges, this is not the reason for its existence. Accomplished goals of certification include: (1) increased quality of education in the graduate (residency) programs; (2) improved standards of practice in the area of medicine, whether all are diplomates or not; and (3) recognition of those young physicians who have taken special training.

In 1916, the American Board of Ophthalmology became the first certifying board. Since that date, there have been created and recognized 22 primary specialty boards. With their stimulation and under their guidance, graduate education programs have reached a zenith, and the American public may feel secure in the fact that young physicians leave the mainstream of organized medical education well equipped.

During the past five years, postgraduate (or continuing) education has proliferated a thousand-fold. Some of this postgraduate education has been excellent, some good, some very mediocre, and some unbelievably bad. There are instances when physicians go to courses and register for credit without attending. It is quite evident now that such an unorganized, expensive, and potentially nonproductive situation for the physician is about to end. With recertification on the horizon, each specific postgraduate education course will be good, or it will cease to exist.

Ophthalmology was the first to actively and vigorously support the concept that graduate education must be of good quality and must be stimulated toward constant improvement. Family Practice, with its mandatory recertification provision, is the first to advocate and support this concept for postgraduate education. Four historic years in medicine are now quite clear: (1) 1756, creation of the first undergraduate school of medicine in the United States; (2) 1911, creation of the liaison committee for accreditation of medical schools; (3) 1916, creation of the first board for examining and certifying graduate education; and (4) 1976, creation of the first mechanism for examining and certifying for postgraduate education.

Development within each certifying board of a special division for the express purpose of recertification and stimulation of quality postgraduate education is certain to follow.

The 1970 class of diplomates of the American Board of Family Practice will, in the future, be proud that they have participated in such an event in history and, in fact, have made it possible.

George E. Burket, Jr., M.D.
President
American Board of Family Practice

Dear Vox Dox:

I would like to bring to your attention a matter of extreme importance related to dissemination of specific information in regard to the diagnosis and treatment of Reye's syndrome, specifically in relation to the University of Kansas Medical Center role. As the Director of the Section of Pediatric Neurology in the Department of Pediatrics, and the primary physician for children referred to this Medical Center with possible Reye's syndrome, I feel that there are problems that are still present which with your assistance can be resolved. The problems appear to be two-fold: one is alerting physicians throughout the state of Kansas that suspicion of Reye's syndrome should be present in any child who has a clinical history of the viral prodromal illness followed by intractable vomiting, with progression to agitation, delirium, and coma. Those children who exhibit normal cerebrospinal fluid findings together with elevated SGOT, elevated SGPT, prolongation of prothrombin time, and elevated arterial or venous ammonia are also specific laboratory findings for this diagnosis. It appears that during the 1974 influenza B epidemic, several patients with Reye's syndrome not referred to the University of Kansas Medical Center uniformly exhibited 100% mortality according to the data I have received from the State Board of Health. In contrast with this data, 12 patients were seen by this physician during the 1974 epidemic of Reye's syndrome with 9 survivors, in whom

8 of the 9 were free of any neurologic sequelae and, in fact, were 100% normal neurologically. In 1975, we have so far had three critically ill patients with two survivors.

My message is that if the physicians throughout the state would cooperate in referring these patients as early as possible, we feel that we have a treatment regimen available at this Medical Center for obtaining survivals in the range of 75-85%. The other feature which may be interfering with optimum medical care of these children is the delay involved in transporting these children to this Medical Center.

I've had the opportunity of conversing with Drs. Huntsberger and Jumper and their physician's assistant, Mr. Michael Lummis, regarding rapid air transportation of critically ill children to this Medical Center, utilizing their Cessna 350 twin engine airplane. As you are aware, their medical practice is in Garden City, Kansas, but in the conversation with these physicians I was assured that they would be willing to fly to any and all parts of the state of Kansas to pick up these severely ill patients and transport them to the University of Kansas Medical Center. This transportation service is not solely limited to Reye's syndrome, but in addition, as you are probably well aware, Dr. Howard Fox, the Director of our Neonatology Section, has utilized the availability of this service for transportation of critically ill neonates.

Thus, by combining a high index of suspicion by physicians throughout the state (early diagnosis) and rapid transportation for aggressive definitive therapy at the University of Kansas Medical Center, we feel that we have the opportunity to provide significant improvement in medical care of these critically ill children over routine and supportive therapy in the years past. The importance of early diagnosis and utilization of aggressive threapy is obvious looking at mortality figures in years past and comparing them to those survival figures at various institutions during the past year. You will note that the addendum to Dr. Simmons *et al.,* paper as the leading article in the June 1975 issue of the JOURNAL OF THE KANSAS MEDICAL SOCIETY points out the importance of results with specific therapy during this epidemic year.

We hope to utilize the talents of the primary physicians throughout the state of Kansas, the assistance of Dr. Huntsberger and his group in providing both medical support and rapid transportation, and the experience that we have accumulated here at the University of Kansas Medical Center to greatly improve medical care in children afflicted with this devastating disease. Your assistance in this terribly important matter would be greatly appreciated, particularly in getting this message across to all primary physicians in the state of Kansas, general practitioners, family physicians, pediatricians, and any and all the physicians involved in the care of children.

LESTER L. LANSKY, M.D.
Associate Professor of Pediatrics
and Neurology
Director, Section of Pediatrics and Neurology
K.U.M.C.
Kansas City, Kansas 66103

OCTOBER: IMMUNIZATION ACTION MONTH

As part of a continuing effort to reduce the incidence of childhood diseases and eliminate the threat of widespread epidemics, the US Center for Disease Control has designated October 1975, as "Immunization Action Month." The goal of the program is to increase the number of children immunized against polio, measles, mumps, rubella, diphtheria, tetanus, and pertussis.

IAM 1975 is a continuation of efforts last year and the year before to increase the immunization levels of preschoolers. Survey results indicate that thanks to IAM 1973 and 1974, the ten-year downward trend in immunization levels among children ages one to four has been reversed. In 1973 alone, half a million more children were immunized against preventable disease than were immunized the previous year.

Unfortunately, despite these effective efforts in 1973 and 1974 over five million preschoolers are still unprotected. That is why several major medical organizations have joined CDC in its program to increase the immunity levels among inadequately or unimmunized preschool children. These include the American Academy of Pediatrics, the American Medical Association, the American Academy of Family Physicians, the National Medical Association, the American Osteopathic Association, the American Nurses' Association, and the National League for Nursing. The American Academy of Pediatrics is coordinating the activities of the major medical organizations in the 1975 IAM program and the professional press relations program.

Explaining the reason for the program, Dr. John J. Witte, Director of the Immunization Division, US Center for Disease Control, said that the percentage of young children immunized against these diseases has been declining at an alarming rate in recent years. As a result, diseases that were once well controlled, such as polio, measles and rubella, are becoming a problem once again. One of the main problems, according to Dr. Witte,

(Continued on next page)



Open Letter to the Doctors of Kansas

Dear Doctor:

Each year has its priorities, but this year you have told us your most urgent one is the Professional Liability Insurance. We are most pleased that you have called upon your Auxiliary membership to assist you. We are eager to give our full support state-wide. We have a great group of talented and enthusiastic ladies, and we are at your service.

First of all, Doctor, will you encourage your wife to become an active and enthusiastic member of the Auxiliary? We have just completed our first 50 glorious years in the organization, and we need EVERY DOCTOR'S WIFE as we strive to meet the many challenges of the day.

We think that your wife will especially want to join the team to help the doctors and the Auxiliary to promote your professional liability program for both the patient and the doctor. We are ready to work with you to promote action in all communities for the best health care and protection possible.

Will you please go over the professional liability proposal with your wife and talk about it with her, so that she is prepared to discuss it when the opportunity arises? We understand that the Kansas Medical Society will sponsor meetings over the state concerning the professional liability proposal. We suggest that you bring your wife to one of these meetings, so that she will be better acquainted with what you want done and be all "fired up" to speak for the cause.

As you know, our other new endeavor is "Operation Helpmate," which was reported in this space in the March issue of the JOURNAL. We are most enthusiastic about promoting it, but we realize that the young doctor is not going to locate anywhere until he can secure professional liability insurance. Therefore, although we feel these two concerns go hand-in-hand, we realize the professional liability insurance must come first.

We appreciate your help and cooperation, and we hope you will continue to call on us when we can help you in any way. Our best wishes for success!

Sincerely,
Anita Yoder
President,
Woman's Auxiliary to the
Kansas Medical Society

Immunization Action

(Continued from page 224)

is that many parents wait until their children approach school age before having them immunized. This leaves the child unprotected during the first four or five years of his life, an age when some of the diseases are most serious and most likely to strike. Moreover, this means that if an epidemic occurs, it is most likely to spread quickly among children of this age group.

The US Center for Disease Control will work closely with organized medicine to urge physicians to audit their patients' immunization records in an effort to upgrade immunization levels for children one to four years old. The long-term objective of the IAM program directed toward organized medicine is the establishment and maintenance of a system capable of motivating both public and private medical officials to sustain a high degree of interest in preschool immunization activities.

(Further information concerning Immunization Action Month may be obtained from the American Academy of Pediatrics, coordinating medical organization for the 1975 program. Contact either Mr. John P. Lynch or Ms Lucy Ranes Maloney, 1801 Hinman Ave., Evanston, IL 60204. Phone: 312-869-4255.)

Information for Authors

Manuscript Preparation

Manuscripts must be typewritten, double spaced, leaving wide margins. Submit the original, plus one copy if possible.

Titles should be short, specific, and amenable to indexing. A subtitle is frequently used to keep the main title short.

Summary: All manuscripts should include a short abstract which is a factual (not descriptive) summary of the work.

Author Responsibility: The author is responsible for all statements made in his work, including changes made by the copy editor. Manuscripts are received with the explicit understanding that they are not simultaneously under consideration by any other publication. Publication elsewhere will be subsequently authorized at the discretion of the Editor.

Galley Proof: To make extensive changes in the article after the text has been set in type may require an additional cost which exceeds the original. The galley proof is for correction of ERRORS, and a rewriting of the article should be done on the original copy BEFORE it is submitted for publication.

Drugs should be called by their generic names; the trade names can be added in parentheses if they are considered important. All *units of measure* must be given in the metric system.

References

Bibliographic references should not exceed 20 in number, documenting key publications. Personal communications and unpublished data should not be included. References should be arranged according to the order of citation, and not alphabetically. All references must be numbered consecutively and all must be cited in the text. Use the style of the AMA publications, giving; name of author, title of article, name of periodical, volume, pages, year.

Illustrations

All material which cannot be set in type, such as photographs, line drawings, graphs, charts, tracings (for preparation of tables, see below) must be mounted on white cardboard. All must be identified on the back as to figure number, author's name, and an arrow indicating top. Legends should be typed double spaced on a separate sheet of paper, limited to a maximum of 30 words.

Drawings and graphs should be done professionally in India ink on illustration board or high grade white drawing paper.

Photographic material should be submitted in duplicate as high-contrast, glossy prints. Color illustrations will be accepted for publication only if the author assumes the cost.

THE JOURNAL will assume the cost of B/W engravings and cuts up to $35 (or 5 cuts). Engraving cost for illustrations in excess of $35 will be billed to the author.

Tables

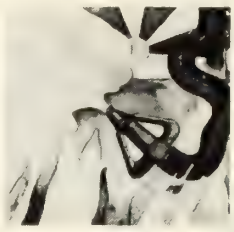
Because tables are set by hand, their cost is comparable to illustrations. A reasonable number of tables are allowed without cost to the author.

Tables should be self-explanatory and should supplement, not duplicate, the text. Since the purpose of a table is to compare or classify related items, the data must be logically and clearly organized. The relationship and comparison are established by the correct choice of column heads (captions of vertical columns)and stubs (left entries in horizontal listings).

Each table should be typed double spaced, including all headings, on separate sheets of lettersize paper. Oversize paper should not be used. Instead, repeat heads and stubs on a second sheet for tables requiring extra width. Number tables consecutively. Each table must have a title.

Reprints

A reprint order form with a table covering cost will be sent with the galley proof to each contributor. Since the JOURNAL has no way to provide for reprints, they must be ordered by the author and purchased directly from the printer.



Pro-Banthine®
brand of
propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted. Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 481

"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action—Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action—Pro-Banthine helps to control the acid-spasm-pain complex.

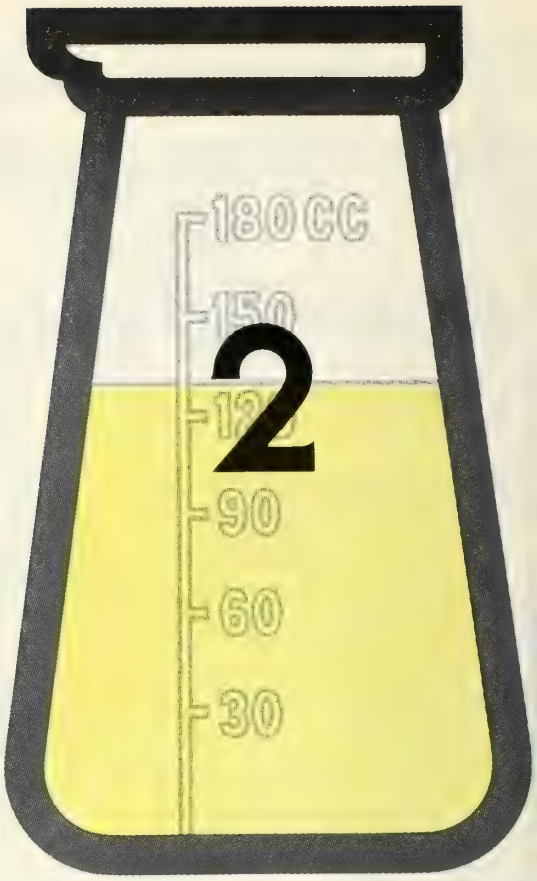
Vigorous anticholinergic action—Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action—Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthine®
(propantheline bromide)

a good option in peptic ulcer





Adequate fluid intake

Frequent voiding

The 3rd Basic



Gantanol®
(sulfamethoxazole) B.I.D.

Four tablets (0.5 Gm each) STAT- then 2 tablets B.I.D. for 10-14 days

Basic therapy with convenience for acute nonobstructed cystitis

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic non-obstructed urinary tract infections (primarily pyelonephritis, pyelitis, and cystitis) due to susceptible organisms. ***Note:* Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials, including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

- **Effective against susceptible E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis and, less frequently, Proteus vulgaris**

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

makes sense



For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* WARNING

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630

Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance. Hydrochlorothiazide to help keep blood pressure down and triamterene to help keep potassium levels up.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

□ Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
□ Can relieve nausea and vomiting often associated with vertigo.*
□ Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
□ Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
□ Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

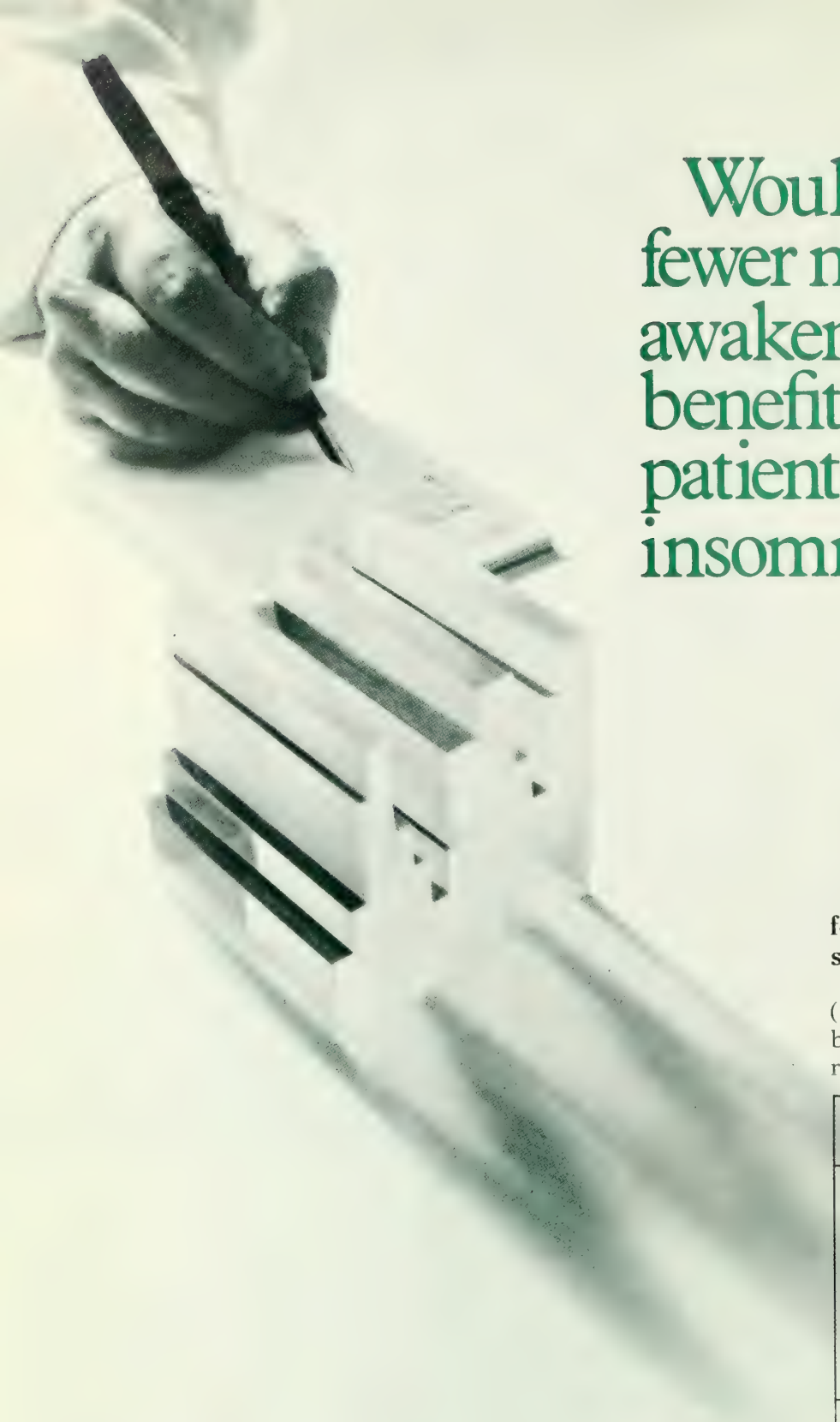
Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

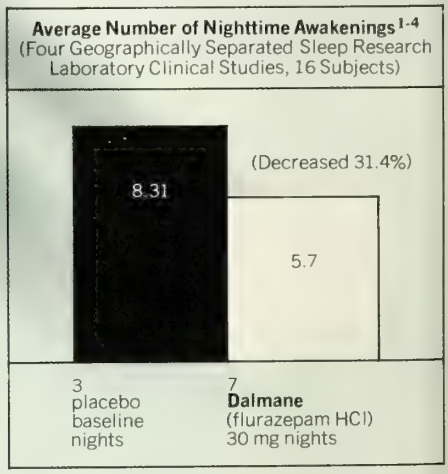
Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*



Would sleep with fewer nighttime awakenings benefit your patients with insomnia?

Highly predictable results for your patients with trouble staying asleep...

...can be obtained with Dalmane (flurazepam HCl). As shown below, Dalmane significantly reduces nighttime awakenings:[1-4]



And for those with trouble falling asleep or sleeping long enough...

...Dalmane (flurazepam HCl) also delivers excellent results. Clinically proven in sleep research laboratory studies: on average, sleep within 17 minutes that lasts 7 to 8 hours.[5]

Dalmane (flurazepam HCl) is relatively safe, seldom causes morning "hang-over"...

...and is well tolerated. The usual adult dosage is 30 mg *h.s.*, but with elderly and debilitated patients, limit the initial dose to 15 mg to preclude oversedation, dizziness or ataxia. Evaluation of possible risks is advised before prescribing.

REFERENCES:

1. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
2. Frost JD Jr: A system for automatically analyzing sleep. Scientific exhibit at the 24th annual Clinical Convention of the American Medical Association, Boston, Nov 29-Dec 2, 1970; and at the 42nd annual scientific meeting of the Aerospace Medical Association, Houston, Apr 26-29, 1971
3. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
5. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

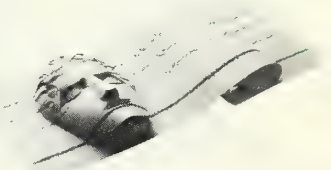
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

Depend on highly predictable results with

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.*— usual adult dosage
(15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.



specifically indicated for insomnia

Objectively proved in the sleep research laboratory:

- **sleep with fewer nighttime awakenings**
- **sleep within 17 minutes, on average**
- **sleep for 7 to 8 hours, on average,**

with a single *h.s.* dose.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?



Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

nain purpose of drug information or the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with his agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

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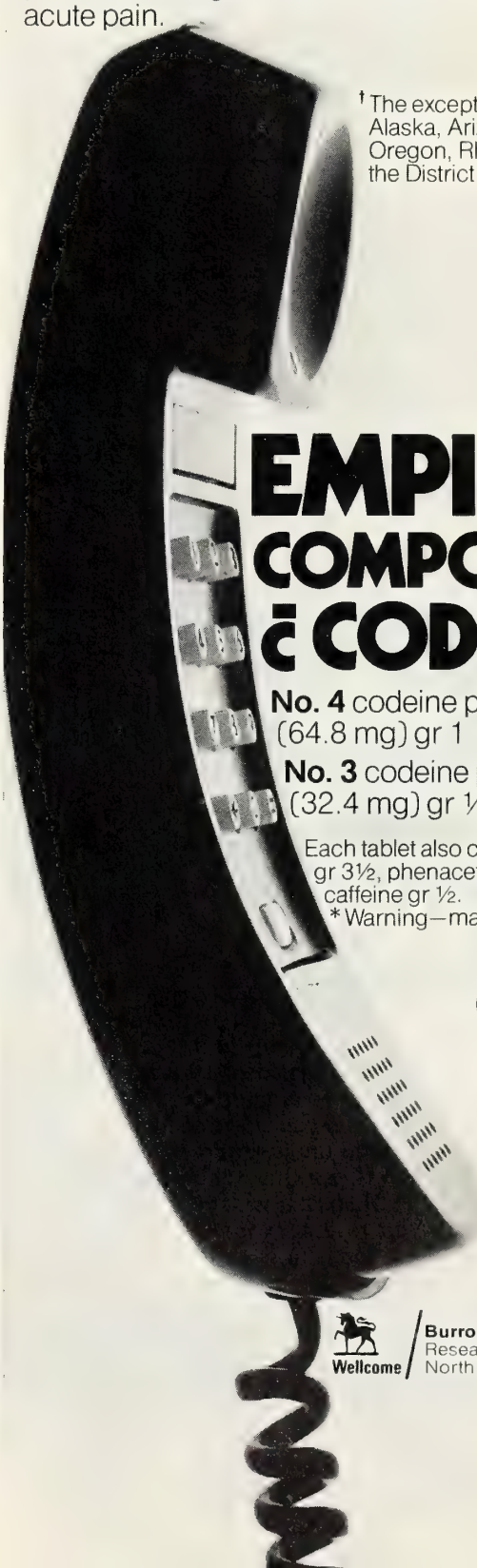
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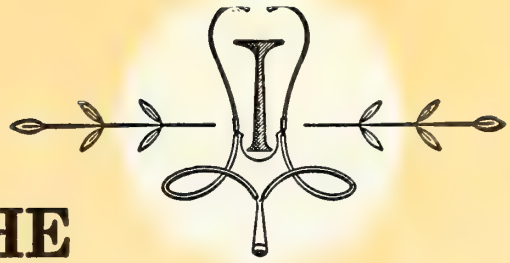
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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

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According to her major
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n provide relief for both—as
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There are other advan-
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anagement of psychoneu-
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ovement is usually apparent
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

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anxiety states
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depressive symptoms

veillance because of their predisposi-
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gnancy, lactation or women of child-
aring age, weigh potential benefit
ainst possible hazard.

cautions: If combined with other psy-
otropics or anticonvulsants, consider
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yed; drugs such as phenothiazines,
rcotics, barbiturates, MAO inhibitors
d other antidepressants may potentiate
action. Usual precautions indicated in
ients severely depressed, or with latent
pression, or with suicidal tendencies.
Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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The JOURNAL of the KANSAS MEDICAL SOCIETY

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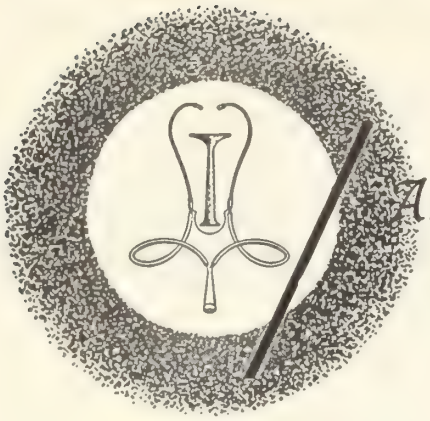
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Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the* Doctor's Calendar. *Notice of the session is posted in advance to allow the physician time to make preparations.

OCTOBER

Oct. 13-17 American College of Surgeons, Fairmont Hotel, San Francisco.

Oct. 15-19 American Ass'n for Clinical Immunology and Allergy annual meeting, Riviera Hotel, Palm Springs. INFO: AACIA, PO Box 912, Omaha, Nebraska 68101.

Oct. 27-29 Omaha Mid-West Clinical Society, 43rd annual postgraduate, Hilton Hotel, Omaha. INFO: John F. Fitzgibbons, M.D., 1040 Medical Arts Bldg., Omaha 68102.

NOVEMBER

Nov. 2-7 Seminar: Toward Understanding Human Behavior and Motivation, The Menninger Foundation, Topeka. INFO: Registrar, Box 829, Topeka 66601.

Nov. 3-8 Laryngology and Bronchoesophagology, University of Illinois Medical Center, Chicago. INFO: Eye and Ear Infirmary, 1855 W. Taylor, Chicago 60612.

Nov. 6-9 American Medical Women's Association, Braniff Place Hotel, Tucson, Ariz. INFO: Lorraine Loesel, American Medical Women's Association, 1740 Broadway, New York, NY 10019.

Nov. 7-8 Mid-American Breast Cancer Symposium, Concourse Hotel, Madison. INFO: Wisconsin Breast Cancer Detection Foundation, 7803 Mineral Point Rd., Madison 53717.

Nov. 17-21 American Heart Association (E), Disneyland, Anaheim, Calif. INFO: William W. Moore, American Heart Association, 44 E. 23rd Street, New York, NY 10010.

Nov. 28-Dec. 6 AMA Clinical Meeting, Hawaii.

DECEMBER

Dec. 4-5 Annual clinical meeting, Kansas City Society of Ophthalmology and Otolaryngology, Plaza Inn, Kansas City, Missouri. INFO: Roger A. Weis, 3036 Gillham Rd., Kansas City, Missouri 64108.

Dec. 5-10 International College of Surgeons (E), Sheraton Waikiki, Honolulu. INFO: W. A. Houser, 1516 N. Lake Shore Dr., Chicago, IL 60610.

Dec. 6-11 American Academy of Dermatology (E, M), Hilton and St. Francis, San Francisco. INFO: John M. Shaw, M.D., 1116 S. Fifth, Tacoma, WA 98405.

JANUARY

Jan. 28-30 American Society for Surgery of the Hand, Fairmont Hotel, New Orleans. INFO: Ms G. M. Gorman, 3 Parker Place, Suite 233, 2600 S. Parker Road, Aurora, CO 80232.

University of Miami School of Medicine

Oct. 18-23 *Obstetrics-Gynecology,* Key Biscayne

Nov. 14-15 *Intra-Aortic Balloon Pump,* Bal Harbour

Nov. 20-23 *Human Sexuality,* Bal Harbour

Jan. 5-8 *Pediatric Nephrology III,* Bal Harbour

Jan. 20-23 *Pathology,* Miami Beach

Jan. 23-25 *Anatomic Pathology,* Miami Beach

Feb. 23-27 *Basic Neurology,* Miami Beach

Mar. 31-Apr. 3 *Renal Disease and Hypertension,* Bal Harbour

For further information, write the Division of Continuing Medical Education, U. of Miami School of Medicine, P.O. Box 520875, Biscayne Annex, Miami 33152.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

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- Can relieve nausea and vomiting often associated with vertigo.*
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- Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association



I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

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Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

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P·M·A

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Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

makes sense



For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* WARNING

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

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'DYAZIDE'

Just once or twice daily for maintenance. Hydrochlorothiazide to help keep blood pressure down and triamterene to help keep potassium levels up.



Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

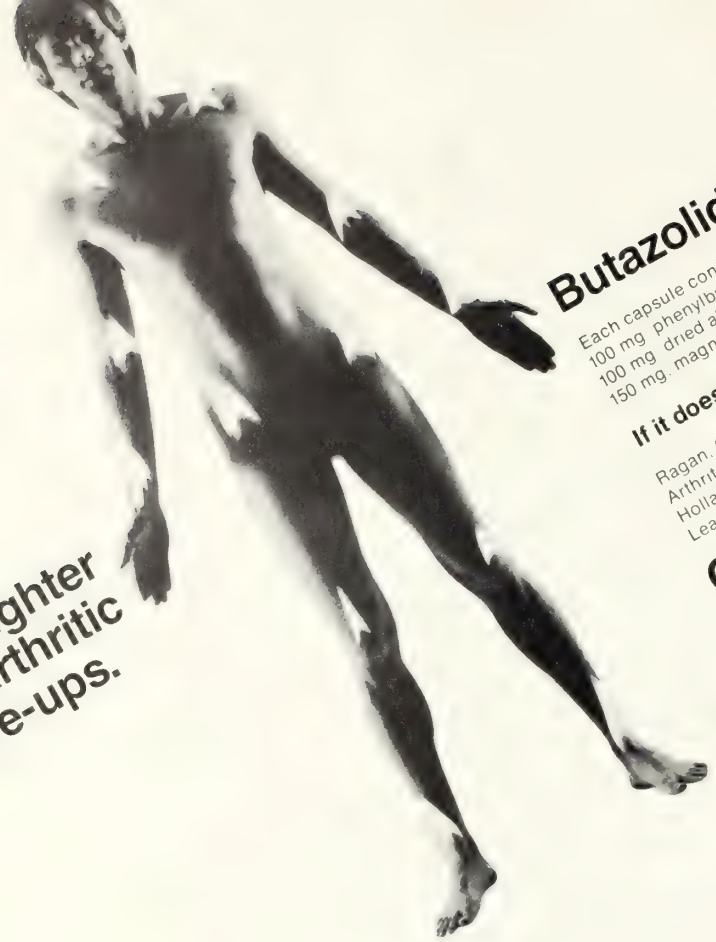
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



Butazolidin® alka

Each capsule contains
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C. The Clinical Picture of Rheumatoid Arthritis. In Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Fire fighter for arthritic flare-ups.

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction; hypertension, thyroid disease; systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
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BU 10259

The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).



INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

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Book REVIEWS

SYMPOSIUM ON RECONSTRUCTION OF THE AURICLE, by Radford C. Tanzer, M.D. and Milton T. Edgerton, M.D. (Editors), The C. V. Mosby Co., St. Louis. 1974. 312 pages, 611 illustrations. $42.50.

Volume X is the latest in volumes produced from the symposia as presented by the Educational Foundation for the American Society of Plastic and Reconstructive Surgeons. This volume presents varying views of more than 25 experts in plastic surgery, otolaryngology, dentistry, and psychology. It brings together in one volume the latest advances and techniques in the field of reconstruction of the auricle. In the volume, a surprising amount of significant but heretofore latent information about ear reconstruction has surfaced.

The book is basically divided into three units, the first consists of 18 articles on congenital deformity of the ear: how they develop, how they are corrected and reconstructed, how they affect hearing, and how they affect the patient psychologically. The next series of chapters deals with traumatic deformities of ear, how burned ears are managed along with mechanical trauma and cancer. The final part of this unit deals with associated deformities of the middle ear and soft tissue, and structures of the face.

The topic of Reconstruction of a Microtia is discussed in five separate chapters. The two points of view, one favoring the use of silicone implants and the opposing view for the use of autogenous cartilage, are thoroughly discussed.

Two chapters deal with non-surgical aspects of ear deformity correction, one dealing with the prosthetic approach which deals with the manufacture of an artificial ear.

Following each topic within the book there is a discussion by the author and other experts in the field.

This volume would be of particular interest to those individuals dealing with plastic surgery of the external ear.—*T.E.K.*

HEROIN ADDICTION IN BRITAIN, by Horace F. Judson, Harcourt Brace Jovanovich, Inc., New York. 1974. 200 pages. $6.95.

The book is divided into the following three parts:

1. The Past: Heroin Maintenance and the Epidemic of Addiction in England, to 1968.
2. Now: Research and Practice at the English Addiction-Treatment Clinics.
3. The Unfinished Business of the Society.

The author has had considerable experience in writing everything from theater to science, and it is apparent that he has done a great deal of research in preparing this book.

He describes the drug problem in Britain and compares it with the problem in the United States. Many interviews were reported that asked not to be quoted, but most of the quotations are actually recorded and written down.

Most of the people in Britain believe that long term methadone treatment is not the best answer for most addicts, but treatment should be altered to each individual person. The use of heroin for maintenance is still considered to be the treatment of choice for many patients.

The book is well written, easy to read and entertaining. The attitude of the clinics in Britain concerning drug addiction seems to have much less anxiety than in the United States.—*G.W.N.*

ERRATUM

September 1975 issue, "Noninvasive Technique," page 191, should read: A plot of the square of the average force versus the average filtered EMG signal difference appeared to be proportional in the form

$$\text{EMG} \propto (\text{force})^2.$$

Figure 3, page 193, should have "Before Fatigue" and "After Fatigue" interchanged.

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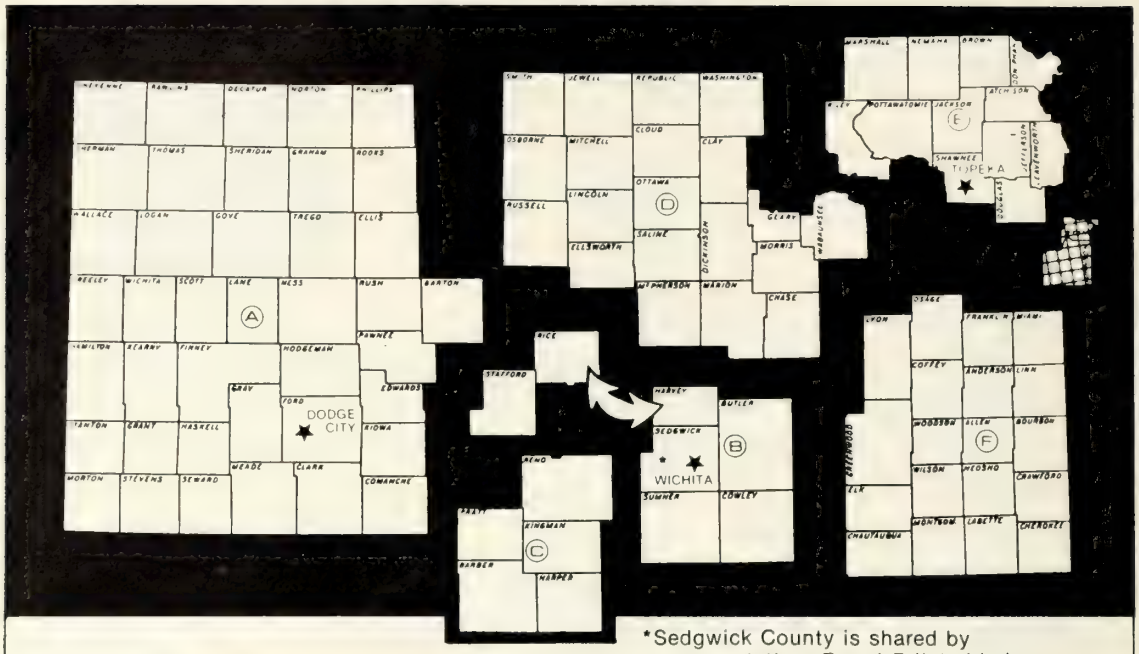
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INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



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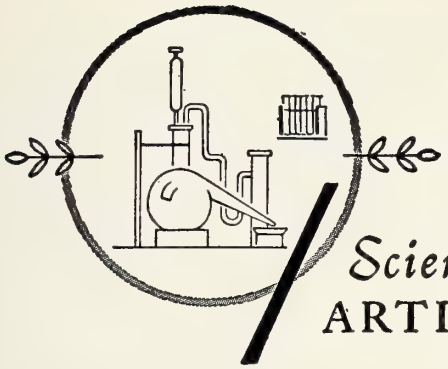


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Primary Definitive Operation

Open Heart Surgery in Infants at KUMC

RICHARD M. ZAKHEIM, M.D., ROBERT L. REIS, M.D., LEONE MATTIOLI, M.D., HAMNER HANNAH III, M.D., *and* ANTONI M. DIEHL, M.D., *Kansas City, Kansas*

RECENT SURVEYS have determined that 2.3:1,000 live-born infants are affected by cardiac abnormalities so severe that death usually results during the first year of life, unless effective surgical treatment is provided.[1] In the past, the treatment of these patients consisted of medical management initially. When this means was ineffective some type of palliative surgical procedure, not requiring open heart surgery, was performed (systemic-pulmonary shunt, creation of atrial septal defect, constriction of pulmonary artery, etc.), producing an additional hemodynamic abnormality to compensate for the hemodynamic abnormalities produced by the congenital defect. Definitive correction of the congenital malformation, using the heart-lung machine, was attempted only when no palliative procedure was available as is the case, for example, in infants with critical aortic stenosis. The successful application of open heart surgery to this group of patients stimulated a reassessment of the results achieved by the two-stage surgical approach (palliative operation, followed at a later time by a corrective operation), which resulted in broadened indications for open heart surgery in critically ill infants. The following report details our recent experience at the University of Kansas Medical Center with open heart surgery in infants (children less than 2 years of age). The indications, techniques, and the results are described.

From the Departments of Pediatrics and Surgery, K.U.M.C., Kansas City, Kansas 66103.

Supported in part by a Neonatal Program Planning Grant, Kansas Heart Association.

Address reprint requests to: Antoni M. Diehl, M.D., Department of Pediatrics, K.U.M.C., Kansas City, Kansas 66103.

Current management of infant cardiac surgery is outlined, stressing the importance of early recognition of symptoms and signs of serious or critical heart disease in the neonate.

Clinical Materials and Results

Between January 1973 and September 1974, 16 children under 2 years of age underwent corrective open heart surgery at KUMC. The anomalies included five infants with transposition of the great vessels, three with ventricular septal defects, two with tetralogy of Fallot, two with aortic stenosis, and one each with hypoplastic right ventricle, total anomalous pulmonary venous return, aortic-pulmonary window, and pulmonic stenosis. The type of anomaly, the age at the time of operation, the weight of the child, and the outcome of the operation are summarized in *Table I.*

The age of the patients at operation ranged from 2 days to 2 years, averaging 9 months; the weight ranged

from 3.6 to 12 kg, averaging 7.4 kg. Fourteen of the 16 infants survived with excellent clinical results. There were two deaths: a 2-day-old infant weighing 3.9 kg, with pulmonary valve and annulus hypoplasia coexistent with a markedly hypoplastic right ventricle, and an 11-day-old infant with the subdiaphragmatic form of total anomalous pulmonary venous drainage, with severe pulmonary hypertension due to increased pulmonary vascular resistance. In both, the anatomic objectives of the operation were accomplished, but unremediable physiologic deficits were incompatible with prolonged extrauterine survival.

Surgical Management

Careful preoperative analysis is essential for the planning of an operation for correction of a congenital cardiac anomaly. Precise advance knowledge of the intracardiac anatomy and circulatory physiology is mandatory and can usually be obtained by cardiac catheterization and selective angiography when correlated with clinical, roentgenographic, electrocardiographic, echocardiographic, and laboratory findings.[2] At operation, careful inspection of the heart and blood vessels prior to institution of cardiopulmonary bypass also is necessary, with particular attention being given to identifying any abnormalities of systemic or pulmonary veins, relationships of the great vessels to the ventricles, and coronary artery anomalies. After instituting cardiopulmonary bypass it is crucial that the surgeon have an in-depth knowledge of congenital intracardiac malformations, as intraoperative modification of the approach to repair is not uncommonly required in spite of detailed preoperative assessment.

Modifications of standard methods for cardiopulmonary bypass were employed in all 16 infants. Evidence is accumulating that techniques utilizing profound total body hypothermia (16-22 C) and circulatory arrest may result in neurologic injury, and we have not employed this approach.[3, 4] In our experience, a combination of hypothermia and brief periods (not exceeding 10 minutes) of markedly reduced systemic flow, provide satisfactory conditions during critical periods of the repair. The postoperative management of these infants is crucial. Specially trained nurses, experienced and knowledgeable with regard to pressure pulse wave forms, the care of catheters placed in the left side of the heart, the

TABLE I

RESULTS OF OPEN HEART SURGERY IN INFANTS AT KUMC BETWEEN JANUARY 1973 AND SEPTEMBER 1974

Type of Lesion	*Operation*	*Age**	*Weight (Kg)*	*Results*
TGA	Mustard	2 yrs	10.0	Alive
TAPVR	Attachment of PV to LA	11 days	3.6	Died†
Hypoplastic RV	Pulm. Valvulotomy	2 days	3.9	Died†
Aortic Stenosis	Aortic Valvulotomy	2 mo	4.4	Alive
Aortic Stenosis	Aortic Valvulotomy	1 mo	3.7	Alive
VSD	Closure	2 mos	4.5	Alive
TGA	Mustard	6 mos	8.2	Alive
VSD	Closure	11 mos	5.7	Alive
VSD	Closure	11 wks	3.8	Alive
Tetralogy of Fallot	Complete Repair	1 yr	8.4	Alive
TGA	Mustard	9 mos	8.0	Alive
TGA	Mustard	1 yr	8.6	Alive
Aortic-Pulmonary Window	Closure	3 mos	4.0	Alive
Tetralogy of Fallot	Complete Repair	18 mos	12.0	Alive
TGA	Mustard	2 yrs	9.7	Alive
Pulmonic Stenosis	Pulm. Valvulotomy	17 mos	11.0	Alive
	Average	9 mos	7.4	14/16 Alive

* Age at operation.

† Anatomic objectives were accomplished by operation. Physiologic circumstances existing, *i.e.,* increased pulmonary vascular resistance in the patient with TAPVR and the hypoplastic right ventricle, were incompatible with prolonged extrauterine survival.

TGA: transposition of the great arteries.

TAPVR: total anomolous pulmonary venous return.

VSD: ventricular septal defect.

PV: pulmonary veins.

LA: left atrium.

Mustard: Mustard's operation for physiologic correction of TGA.

Pulm.: pulmonary.

recognition of low cardiac output states, pulmonary dysfunction, and cardiac arrhythmias are absolutely essential. A nurse-patient ratio of one-to-one is required during the immediate postoperative convalescence. Early hospital discharge is desirable for numerous reasons and we have, for example, discharged some patients three or four days following total physiological correction of transposition of the great vessels (Mustard procedure).[5]

Discussion

Just a few decades ago, only a few cardiac defects leading to death in infancy were correctable by surgery. These included abnormalities involving primarily the great vessels, such as patent ductus arteriosus and coarctation of the aorta. Presently, 80 per cent of congenital cardiovascular malformations are amenable to surgical correction or palliation; fortunately, complete anatomic or physiologic correction is possible in the majority of candidates.

There are basically four indications for cardiac surgery in infants: (1) severe congestive heart failure not responsive to medical management; (2) severe cyanosis; (3) failure to grow and develop secondary to cardiac impairment; and (4) somewhat less common, a cardiac malformation, the usual consequence of which is a course characterized by anatomic or physiologic deterioration, making later definitive repair less satisfactory or impossible.

The congenital heart defects that frequently fulfill the indications for surgery in infancy can be divided into three groups *(Table II)*: (1) malformations for which no palliative procedure is available, but for which definitive complete repair is possible (Group A); (2) malformations for which palliative procedures have achieved acceptable results and for which complete correction is also possible (Group B); (3) malformations for which complete correction is not presently possible (Group C). In this third category, many infants can be palliated when necessary.

Discussion of some of the malformations in Group B is appropriate, since it is in this group that the greatest change in recent management has occurred.

Ventricular septal defect

Since its introduction by Muller,[6] pulmonary artery banding to reduce pulmonary blood flow and pressure has been an accepted and often life-saving procedure for infants in severe congestive heart failure with ventricular septal defect. However, this procedure is associated with unanticipated complications such as spontaneous closure of the ventricular septal defect, the development of right or left ventricular outflow tract obstruction, and migration of the pulmonary artery band which may produce obstruction to the left or right pulmonary artery. In addition, the combined mortality of pulmonary artery banding and later repair may be unusually high. Based on these considerations, we and others[7] recommend definitive intracardiac repair in infants with ventricular septal defect in whom surgery is indicated regardless of body size, provided that left ventricular angiograms show absence of multiple ventricular septal defects. In this latter group banding is still preferred.

TABLE II

CLASSIFICATIONS OF COMMON TYPES OF CONGENITAL HEART LESIONS ACCORDING TO TYPE OF SURGICAL PROCEDURES AVAILABLE

Group A: No palliation but definitive procedure available
Aortic Stenosis
Pulmonic Stenosis
Total Anomalous Pulmonary Venous Return
Group B: Palliative and definitive procedures available
Ventricular Septal Defect
Tetralogy of Fallot
Transposition of Great Vessels
Truncus Arteriosus
Atrioventricular Canal, Partial or Total
Double Outlet Right Ventricle
Group C: Only palliation available
Single Ventricle
Tricuspid Atresia
Mitral Atresia
Various Complex Lesions

Tetralogy of Fallot

Until recently, it has been our preference to perform a systemic-to-pulmonary artery shunt in infants with tetralogy suffering from hypoxic spells or failure to thrive secondary to systemic hypoxia. For these infants a Blalock-Taussig shunt, which was the first type of systemic-to-pulmonary artery shunt to be developed, remains the best palliative procedure, although in the smallest of infants other types of shunts may be required. While shunts can be performed with minimal morbidity and mortality and usually provide dramatic clinical benefit, progression of the right ventricular outflow obstruction from stenosis to atresia—which may occur spontaneously—is usually facilitated by the shunt making later definitive repair less satisfactory. It is our impression that infants do not tolerate cardiopulmonary bypass well immediately following prolonged severe hypoxic spells accompanied by acidosis and unconsciousness. It is, therefore, our current policy to perform primary corrective procedures in symptomatic infants with the tetralogy of Fallot, irrespective of the infant's age, unless severe prolonged hypoxic spells necessitate emergency operation. For the infant requiring emergency

operation within 48 hours of prolonged hypoxic spells, we perform a systemic-to-pulmonary artery shunt, preferably a Blalock-Taussig anastomosis. In our hands, the surgical risk of early definitive repair is comparable to that of the combined risk of palliative shunting and repair at a later age. An important advantage for the early one-stage repair is complete physiologic correction at an age when growth and development are crucial.

Transposition of the great arteries

This malformation almost always results in severe physiologic impairment in the first month of life. Current management involves an initial palliative procedure to relieve left atrial and pulmonary venous pressure elevations and to improve mixing of blood between the pulmonary and systemic circuits, thereby increasing the systemic oxygenation. This palliation is achieved by creation of a defect in the atrial septum, either with a balloon atrial septostomy catheter at diagnostic catheterization or by surgical creation of an atrial septal defect. The objective is to permit survival until the size of the atria is optimal for surgical creation of an intraatrial baffle that reroutes systemic and pulmonary venous return, thus physiologically correcting the lesion and abolishing cyanosis (Mustard procedure).[5]

Previously, the Mustard procedure was deferred until 2-4 years of age; this is still acceptable, but the delay of definitive repair has several disadvantages. First, it required that the child remain severely cyanotic for the first two to four years of life. Second, occasionally these children die suddenly, suffer cerebral vascular accidents due to anemia or very high hematocrits, or develop occlusive pulmonary vascular disease with high pulmonary vascular resistance before repair is performed. Balloon septostomy, although successful temporarily, has not been as reliable as atrial septectomy in permitting survival until 2 years of age. In the past, these infants underwent surgical atrial septectomy in the first year of life, prior to correction at 2-4 years of age. With the advent of successful corrective surgery in the first year of life, our current policy following successful balloon septostomy is to perform definitive repair between 6 months and 1 year of age.

Summary

The field of infant cardiac surgery has undergone tremendous advances in recent years. Current management as outlined in this paper achieves extremely gratifying results. Favorable outcomes for many infants with operable heart disease are vitally dependent upon primary physicians and paramedical personnel, to recognize very early the symptoms and signs of serious or critical heart disease in the neonate.[8] Prompt referral of such infants to tertiary cardiac care centers, where pediatric cardiologists can coordinate the appropriate diagnostic and therapeutic management, will provide a durable cure for most infants who otherwise would die.[1, 9, 10]

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Viewing the Future

Intraocular Lenses

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MAN HAS KNOWN of the existence of cataracts for thousands of years; he has recorded the treatment of cataracts for almost as long as he has recorded history. In the last 30-40 years, the technical advances in the surgical removal of the clouded lens (cataract) have been remarkable, and this has been duly recorded in voluminous papers and textbooks. Ancient man merely pushed the clouded lens aside. This was accompanied, hopefully, by an opening large enough for the light rays to be focused on the retina, there being an absence of the lens-focusing mechanism following this procedure. If successful, this was obviously better than being totally blind, but the rate of complications was extremely high. Also, because the diseased tissue was not removed from the eye, secondary problems frequently ensued, resulting in the eventual loss of any useful vision, and often of the eye itself *(Figure 1)*.

Modern surgery and anesthesia have led to many refined techniques for the removal of the clouded lens. All surgery may be accompanied by complications or less than perfect results. The percentage of untoward results has been significantly reduced in the last few decades in cataract surgery, and remains relatively low today.

The treatment of the patient following the removal of a cataractous lens has undergone recent advances. The lens deficient patient may now receive: (1) no treatment; (2) cataract spectacle; (3) contact lens; or (4) intraocular lens.

If definitive restoration of sight is selected by the ophthalmologist as being most suitable, the most common method employed is the use of the spectacle lenses. Despite marked improvements in the manufacture, their use involves many compromises, such as: (1) marked dependence upon the spectacles; (2) magnified image; (3) limited visual area through which objects are clearly seen; (4) limited visual fields.

Contact lenses are the second method of restoration of sight having the advantages of providing more normal image size, a wider visual area through which objects are clearly seen, and a wider visual field. However, as our population grows older, we find distinct disadvantages in the use of contact lenses for various reasons. Some of these are: (1) dependence; (2) difficulty with handling and cleaning of the lens, which increases with age and the infirmities associated with age; (3) inability to see the contact lens when out of the eye in order to place it in the eye, particularly in low illumination; (4) inability to place the lens into the eye because of a stroke, tremor, or other neurological disease.

Methods of restoration of sight following cataract surgery are discussed, with emphasis on newer procedures allowing the post-cataract patient more normal sight.

An intraocular lens obviates all of the above patient objections since it replaces the lens of the eye, thereby greatly "normalizing" the patient's visual abilities. The patient wears an ordinary type of spectacle with a bifocal or trifocal lens which contains only his residual correction and reading addition. This is similar to the type of glass the patient has worn prior to developing a cataract *(Figure 2)*.

It has been the dream of ophthalmologists for many years to find a suitable substitute for the normal lens. It was the repeated observation of many eye surgeons during the early part of World War II that pilots who were subject to intraocular foreign bodies, which arose from the canopies of Spitfires (fighter airplanes), were found to have little or no foreign body reaction. This was observed with such frequency as to become apparent that the canopy plastic (Perspex) deserved considerable scrutiny. After World War II (and following extensive animal studies), this material was indeed found to have very little toxicity in the human eye.

A simple classification of intraocular lenses, of which there have been many types, would be as follows (it is based upon the position of the lens within the eye): (1) anterior chamber lenses; (2) posterior chamber lenses; (3) iris plane lenses. Originally, lenses were

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placed in the posterior chamber, which afforded advantages to many persons. However, because their fixation was poor and with severe problems due to dislocations in a significant percentage of people, this procedure was abandoned.

Anterior chamber lenses were tried next. The fixation was excellent, but this was accompanied by disturbance of the angle mechanisms where the functioning trabecular meshwork (fluid circulating inside the eye exits in this area) is located. Episodes of recurrent corneal edema were also observed.

Iris plane lenses were subsequently attempted, which had the distinct advantage of placing the lens in nearly the position that it normally rests in the human body, the anterior capsule of the lens being at the iris plane. Over the last 15 years, some excellent iris plane lenses have been developed and we now have enough experience to say that this mode of therapy is increasingly useful. The inherent advantages of the iris plane intraocular lens are:

1. Vision. The patient has relatively normal vision even without glasses, although frequently requiring a prescription for residual ametropia and for accommodative purposes;

2. Visual field. The visual fields of these patients are relatively normal;

3. Normal or near-normal image size of objects. The patient's binocular ability is less impaired with a partially cataractous eye on the other side. This is one of the most important beneficial aspects of the intraocular lens. It allows the patient to see much more normally than he was able to see with an aphakic spectacle or with a contact lens;

4. Without correction of any type, the patient is normally able to get around and frequently needs no glasses at all, except for close work. This can be extremely important to a person who is markedly arthritic, has had a stroke, or other neurological disease *(Figure 3)*.

Summary

Presented were a group of 50 consecutive cases which have been performed in Topeka with their initial and ultimate visual acuities *(Table I)*. It is to be noted that this is a highly selected group. The individuals were extremely elderly, all except four exceeding the age of 70, with several above the age of 90. Many of these patients were physically or mentally handicapped in such a way that they were prime candidates for this procedure, and probably would not have done well with more conventional types of surgery. The surgical results were good, the complications few, and the convalescence much easier than with prior methods. The final visual abilities of this group are considered excellent.

TABLE I

	Best Vision With Correction Prior to Surgery		*Best Vision Without Correction After Surgery*		*Best Vision With Correction After Surgery*	
	DISTANCE	NEAR	DISTANCE	NEAR	DISTANCE	NEAR
1.	L.P.	L.P.	20/40	J 5	20/30+	J 2
2.	L.P.	J 10	20/200	J 10	20/100-20/80	J 10
3.	L.P.	L.P.	20/200	J 12	20/30	J 5
4.	L.P.	L.P.	20/25	J 5	20/25	J 2+
5.	20/70+	J 5	20/50	J 8	20/30	J 2
6.	20/200	J 12	20/40	J 10	20/40	J 3
7.	20/200	J 14	20/60	J 6	20/40	J 2
8.	L.P.	L.P.	20/50	J 14	20/30+	J 1
9.	20/200	J 8	20/100	J 8	20/70	J 5
10.	20/50	J 10	20/100	J 5	20/25	J 1
11.	L.P.	L.P.	20/60	L.P.	20/50	J 10
12.	20/60	J 10	20/60	J 14	20/25	J 2
13.	20/40	J 8	20/30	J 7	20/25	J 1
14.	L.P.	J 8	20/200	J 1	20/25	J 1
15.	L.P.	L.P.	20/100	J 7	20/60	J 10
16.	20/50	J 14	20/100	J 10	20/25	J 2+
17.	20/200	L.P.	20/100	J 14	20/100	J 14
18.	20/200	J 12	20/60	J 3	20/50	J 5
19.	L.P.	L.P.	L.P.	L.P.	20/200	L.P.
20.	20/200	L.P.	20/40	J 7	20/20	J 1
21.	L.P.	L.P.	20/70	J 3	20/20	J 1
22.	L.P.	J 8	20/30	J 12	20/40	J 5
23.	L.P.	L.P.	20/60	J 14	20/60	J 12
24.	20/100	J 10	L.P.	J 8	20/40	J 8
25.	L.P.	L.P.	20/50	J 5	20/40	J 2
26.	20/200	J 12	20/30	J 5	20/20	J 1
27.	L.P.	L.P.	L.P.	L.P.	L.P.	L.P.
28.	L.P.	L.P.	20/100	J 14	20/30	J 2
29.	20/70	J 8	20/25	J 6	20/20	J 1
30.	L.P.	L.P.	20/30	J 8	20/20+	J 1+
31.	20/60	J 5	20/40	J 5	20/40	J 2
32.	L.P.	L.P.	20/25	J 7	20/20	J 1
33.	20/200	L.P.	20/50	J 7	20/25	J 2
34.	20/200	J 14	20/50	J 8	20/40	J 1
35.	L.P.	L.P.	20/100	J 8	20/40	J 5+
36.	20/200	J 1	20/30	J 8	20/30	J 1
37.	20/70	J 8	20/40	J 1	20/30	J 1
38.	20/100	J 6	20/50	J 8	20/25	J 2
39.	20/100	L.P.	20/30	J 8	20/25	J 3
40.	20/200	J 6	20/40	J 2	20/20	J 1
41.	20/70	J 7	20/100	J 1	20/30+	J 1
42.	L.P.	L.P.	20/20	L.P.	20/20+	J 1
43.	L.P.	L.P.	20/70	J 14	20/20	J 1
44.	20/70	J 5	20/40	J 2	20/20	J 1
45.	L.P.	J 7	20/60	J 1	20/25	J 1
46.	L.P.	L.P.	20/25	J 2	20/20	J 1+
47.	L.P.	L.P.	20/60	J 14	20/25	J 1
48.	20/60	J 7	20/200	J 12	20/30	J 1
49.	20/200	J 14	L.P.	J 5	20/20	J 1
50.	20/100	J 5	20/30	J 2	20/20	J 1

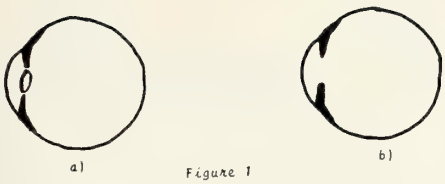


Figure 1

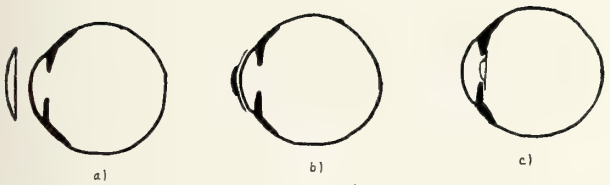


Figure 2



Figure 3

Figure 1. Normal and post cataract eye. a) Represents schematic drawing of normal eye with intact lens. b) Represents schematic drawing of post cataract eye with absence of lens.

Figure 2. Types of correction in post cataract eye. a) Represents schematic drawing of post cataract eye with spectacle correction. b) Represents schematic drawing of post cataract eye with contact lens correction. c) Represents schematic drawing of post cataract eye with intraocular lens correction.

Figure 3. Types of intraocular lenses. a) Represents schematic drawing of post cataract eye with posterior chamber lens. b) Represents schematic drawing of post cataract eye with anterior chamber lens. c) Represents schematic drawing of post cataract eye with iris plane lens.

Addendum

Since the presentation of this paper for publication, the author has performed the above described procedure in 200 cases. The results were extremely favorable, not only in the short range, but over the long term for patients with this type of visual disability.

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Selection of Patients

Indications for Coronary Evaluation–1975

JAMES F. BRYMER, M.D., MARVIN DUNN, M.D., DAVID M. PUGH, M.D. *and* BERT WONG, M.D., *Kansas City, Kansas*

CORONARY HEART DISEASE is currently the leading cause of death in America, and a major cause of illness and disability in the adult population. Medical treatment of causative factors such as hypertension, diabetes, hyperlipoproteinemia and tobacco abuse, and of symptoms of chest pain and congestive heart failure, are often of great benefit. Despite such medical measures, however, many patients continue to be disabled or greatly bothered by unrelieved symptoms. The development of successful operative treatment (saphenous vein aortocoronary bypass) in recent years has opened a new therapeutic avenue for such patients. The purpose of this communication is to summarize the current indications for consideration of patients for further evaluation and special cardiovascular studies. Complete evaluation includes history, physical examination, chest roentgenogram and electrocardiogram, stress testing, phonocardiography and echocardiography where appropriate and, in most cases, cardiac catheterization and coronary arteriography, as a prelude to consideration for operative treatment.

Two broad categories of patients require such further evaluation: (1) those patients in whom the diagnosis of coronary disease has already been made, and in whom the question to be answered is the patient's suitability for bypass operation; and (2) patients with symptoms or other findings suggestive of coronary disease but whose diagnosis remains unclear. In the latter group, studies are undertaken primarily to establish a diagnosis of coronary disease, whether or not the severity of symptoms requires consideration for treatment. These two categories will be discussed separately in detail.

Category I: Diagnosis of Coronary Disease Clear on Clinical Grounds

Category I includes patients with documented prior myocardial infarction, patients with classical symptoms of angina pectoris, and patients with positive exercise stress test electrocardiograms.

Documented myocardial infarction, proven by diagnostic Q waves on electrocardiogram or characteristic serum enzyme rises after a typical clinical presentation, almost certainly implies serious coronary artery obstruction. Occasional patients who appear to have normal coronary arteriograms after a documented myocardial infarction have been reported.[1, 2] In some cases, causes such as thromboembolism (related to oral contraceptives, prosthetic heart valves and septal defect patches, or occurring spontaneously), disorders of hemoglobin-oxygen dissociation, and coronary spasm have been postulated or proven. But these cases are probably exceptions to the vast majority of infarctions that result from coronary disease.

A summary of current indications for selection of patients for diagnostic coronary studies and for consideration of operative treatment.

The clinical syndrome of angina pectoris, as defined in *Table I,* implies severe obstruction of one or more major coronary branches in 80 to 90 per cent of patients. A study performed by one of the authors demonstrated that 92 per cent of patients presenting with typical angina pectoris had serious coronary obstruction.[3] Other reports have shown similar correlations.[4, 5]

A positive exercise electrocardiogram, likewise, is a reasonable indicator of coronary obstruction. While the extensive literature treating this subject is sometimes confusing,[6] the recent report cited[7] appears representative, indicating coronary obstruction found in 62 per cent of patients with positive tests (1 mm RS-T segment depression or more) and normal coronaries in 89 per cent of patients with negative tests.

Not all patients in this category in whom coronary disease is quite clearly present require extensive evaluation and special studies, since many such patients will be only minimally symptomatic or asymptomatic. Those who do merit evaluation are the following.

Unstable Angina Pectoris

The term "unstable angina" is more inclusive than and preferred to such formerly used terms as "inter-

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TABLE I

CRITERIA USED TO IDENTIFY TYPICAL ANGINA PECTORIS

1. Chest pain that involves some part of the sternum.
2. Chest pain precipitated by exertion, emotion, cold exposure, heavy meals.
3. Chest pain that is visceral in quality—*i.e.,* squeezing, burning, tightness, pressure.
4. Pain should not last longer than 20 minutes after cessation of activity.
5. Pain should be promptly relieved by nitroglycerin.

mediate coronary syndrome," "pre-infarction angina," "angina decubitus," and "crescendo angina," among others. Patients with unstable angina include those with newly developed symptoms of typical angina who were previously well, patients with established stable angina whose pain has become crescendo in quality, increasing over a short period of time in severity or in frequency, and patients whose angina, previously related to effort or exertion, begins to occur at rest. Several reports suggest that such patients may be at greater risk of sudden death or myocardial infarction than patients with stable angina.[8–10] Thus, we prefer to undertake coronary studies in these patients without delay and proceed to operative treatment, if indicated. Reports have recently appeared[11] indicating no increase in operative risk in such patients if acute infarction has not already occurred, and this has been our experience as well.

"Stable" but Incapacitating Angina

In the initial experience with coronary bypass surgery, this group of patients constituted the majority of those operated upon. This group consists of patients with established, typical angina pectoris which is not adequately relieved (a judgment admittedly subjective and likely to vary from one patient to another) by measures aimed at treatment of symptoms, such as sublingual-nitroglycerin, oral propranolol in sufficient dosage to produce moderate bradycardia, weight loss in the obese, cessation of cigarette smoking, and control of hypertension. Failure or inability to comply with an ideal medical program should not exclude a patient from consideration for operative treatment, and patients who remain seriously symptomatic after a reasonable trial of medical measures are certainly candidates for further evaluation for operation.

"Stable" Angina with Markedly Positive Exercise ECG

We believe that patients who have markedly positive exercise stress tests (treadmill, bicycle ergometer, or double Master two-step tests) constitute a high risk group, even though their symptoms of angina may be stable and not incapacitating. Stress tests, such as the one illustrated in *Figures 1 and 2,* showing RS-T segment depression of 2 mm or more, often imply either left main coronary artery obstruction or high-grade proximal obstruction of the left coronary branches *(Figures 3 and 4).* In the natural history study previously cited,[3] patients with two- and three-vessel coronary disease, particularly when the proximal left anterior descending branch was involved, had a mortality rate of nearly 10 per cent per year, and those with left main coronary disease had even higher mortality. Other investigators have made similar observations. Thus we feel there is some urgency about studying and, where appropriate, operating upon such patients without delay.

Angina or Prior Myocardial Infarction in a Young Person

In this group we are rather arbitrarily considering patients in the second, third, and fourth decades of life. Coronary disease is not unusual after age 40. Isolated myocardial infarction without major coronary obstruction or with normal appearing coronary arteriograms tends to be limited to younger patients. Some patients in this group may not have coronary disease requiring treatment, nor the poor prognosis for long life that coronary obstruction implies. Most young patients who have typical angina (with or without prior infarction) will have coronary disease, however, and while there is no evidence that the disease is more malignant in this age group than others, long-term followup of a group of young patients by the Cleveland Clinic group indicates that neither is the disease more benign.[12] If aorto-coronary bypass operations will add anything to medical and preventive measures to improve long-term survival and prevent future myocardial infarction, application of the operation to young patients would be especially appropriate. Thus, we single out this age group for partciular mention as candidates for further study when coronary disease is clinically apparent.

Angina Following a Healed Myocardial Infarction

Patients who recover uneventfully from a myocardial infarction and are free of symptoms of angina after a return to full activity are not necessarily automatic candidates for study (with the possible exception of young patients as noted above). Those who are troubled by angina, however, may be assumed to have either incomplete occlusion of the vessel responsible for the infarction (and, implicitly, some ischemic, non-infarcted heart muscle that might benefit by improved blood supply) or disease in other coronary vessels, causing

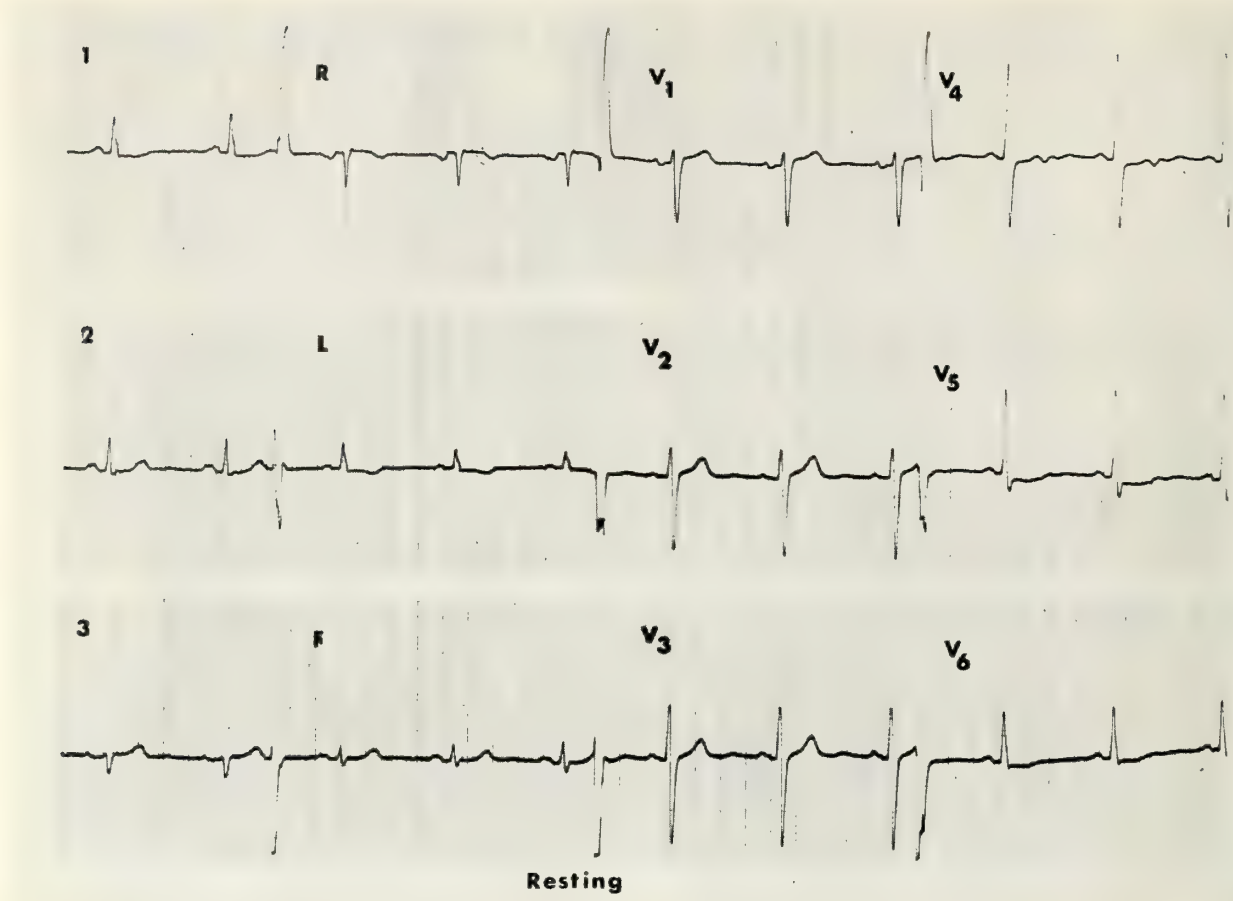


Figure 1. Resting elecrtocardiogram shows minor RS-T segment depression in leads I, V_5 and V_6.

ischemia in other than the infarcted area. These patients are candidates for study. In general, we do not believe that the risks of study are measurably increased in such patients. Early evidence suggests, as well, that operative risks are not increased significantly unless left ventricular function is moderately or severely impaired.

Catheterization study and bypass surgery are generally not indicated during an acute infarction because operative mortality in patients so managed has been excessively high.[13, 14] There are two exceptions to this rule: (1) Emergency operations may be undertaken for myocardial infarction that occurs during cardiac catheterization when operation can be performed within a very few hours; and (2) occasional patients may be studied and operated for cardiogenic shock and pump failure occurring during an acute myocardial infarction. The latter patients often will require ventricular assist devices to support their circulation during study and until cardiopulmonary bypass can be established in the operating room. This is an experimental procedure at present, and overall results have not as yet been very encouraging.

Congestive Heart Failure, Arterial Thromboemboli, Ventricular Arrhythmias Following Healed Myocardial Infarction (Ventricular Aneurysm)

One or more of the symptoms and signs outlined in this heading constitute the presenting features of symptomatic left ventricular aneurysm, the not uncommon sequel to extensive myocardial infarction. Because the dilated, bulging scar tissue that makes up the aneurysm is not contractile, ventricular efficiency as a pump is often markedly reduced, producing congestive failure and, often, a marked imbalance between oxygen demands of the remaining functional myocardium and available coronary blood supply. This imbalance may greatly aggravate symptoms of angina. Mural thrombus may form in the aneurysm and arterial emboli occur. The aneurysm may generate or propagate serious ventricular arrhythmias. Aneurysmectomy, sometimes accompanied by aortocoronary bypass of other diseased vessels, when the aneurysm is of suitable size, shape and location, will improve ventricular performance and usually alleviate the symp-

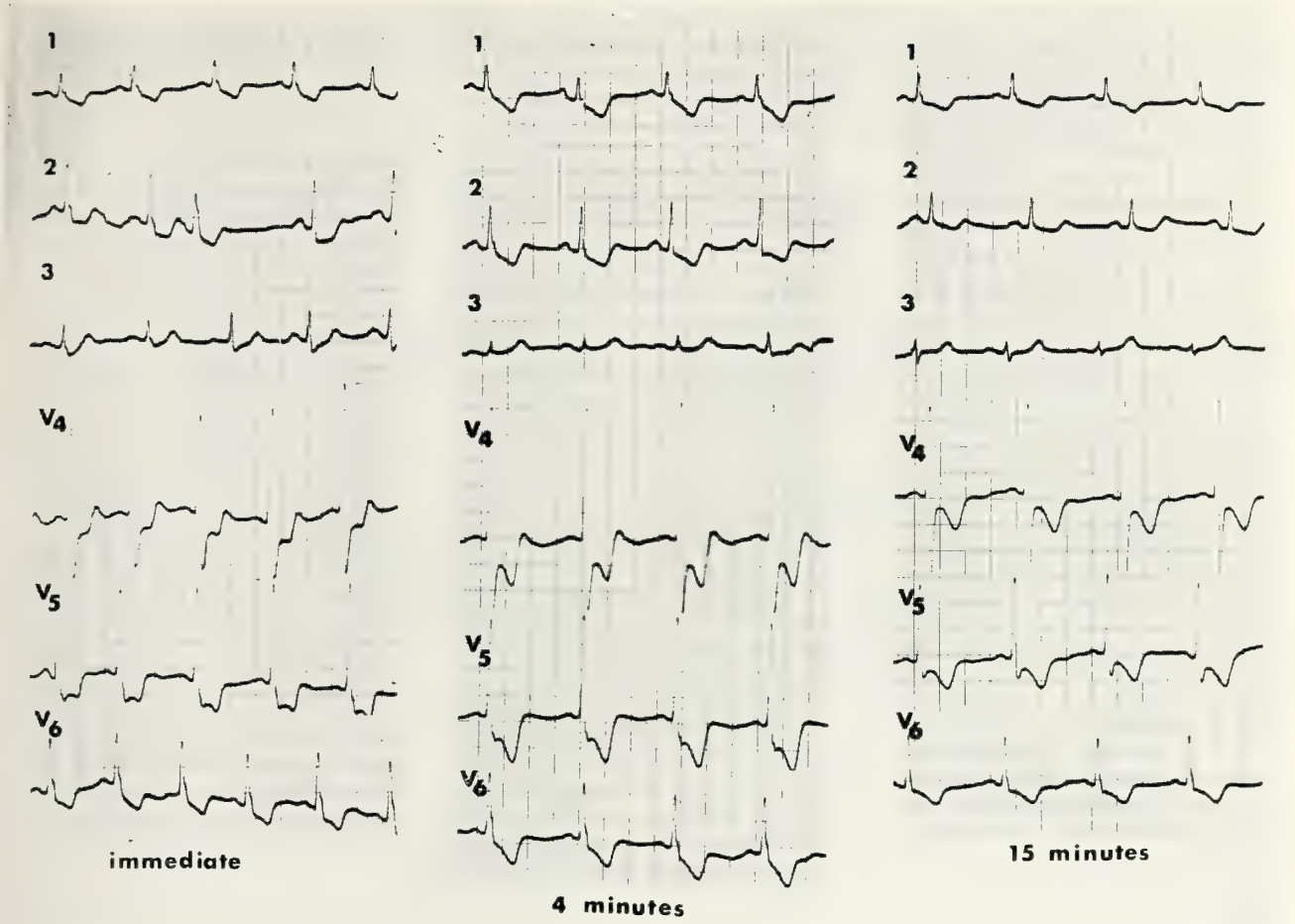


Figure 2. After a 40-trip Master two-step test, marked RS-T depression and T wave inversion is seen in all leads. Patient did not develop angina pectoris during exercise but started having pain shortly after the test.

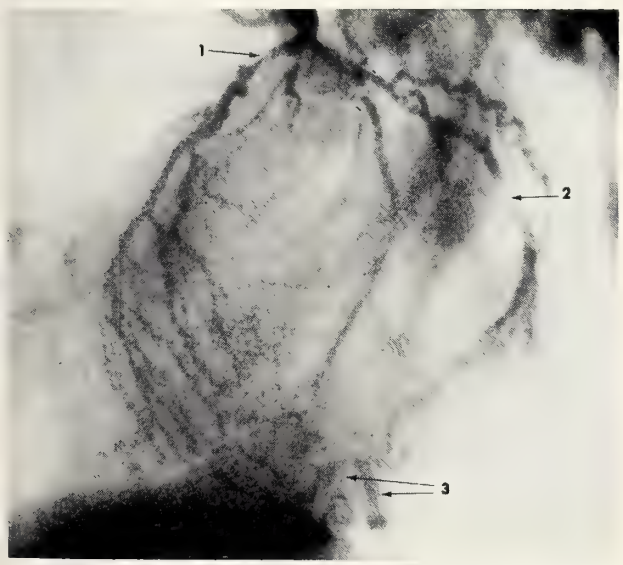


Figure 3. Left coronary artery injection, left anterior oblique (LAO) projection. High grade stenotic lesions of anterior descending (1) and posterior circumflex (2) branches. Distal right coronary (3) is seen filling by collateral vessels.

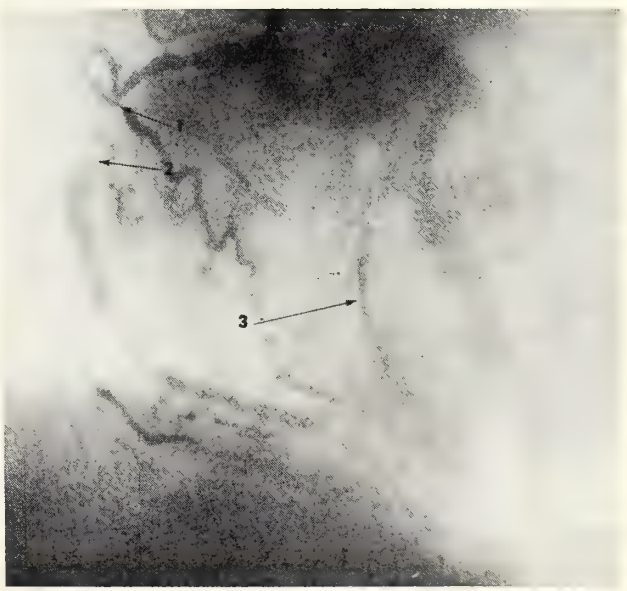


Figure 4. Right coronary artery injection, LAO projection. Total occlusion of the proximal right coronary (1), reconstitution distally (2) by bridging collaterals. Distal left anterior descending (3) fills by collaterals.

toms. When suitable patients are carefully selected, the operation can be done with acceptable risk (roughly 8-10 per cent operative mortality is being reported nationally at this time). Thus, patients with symptomatic ventricular aneurysms merit early study.

Category II: Study Undertaken to Clarify Diagnosis

While many patients will fall into one of the groups outlined above, many patients with chest pain do not have typical angina. Nearly 40 per cent of patients in one study[3] had atypical pain. Though the pain syndromes described by those patients failed to meet criteria established for definition of typical angina, 31 per cent with atypical pain had abnormal coronary arteriograms.

Many patients give a history suggesting prior myocardial infarction—or may have been told that they had an infarction, but the event was not documented, nor is it evident on the electrocardiogram. Other patients may not complain of pain, nor have a history of infarction—but may be found to have abnormal resting or exercise cardiograms suggesting ischemic heart disease.

Some female patients, in the age range 30-50 years, have chest pain syndromes that are especially difficult to distinguish from ischemic heart disease without coronary arteriography. Such patients not infrequently will have borderline or positive exercise electrocardiograms, particularly those who have the mitral valve prolapse syndrome (mid systolic click—late systolic murmur syndrome), though arteriography subsequently reveals no coronary artery obstruction.

Such patient problems as these often require further study to establish—or to eliminate from consideration—a diagnosis of coronary disease. Further study is appropriate when patients are sufficiently bothered by pain to require frequent physician visits, coronary care unit admission, and especially if strong analgesic drugs are required (one atypical feature often encountered is a failure of response to nitroglycerin). The requirements of employment, insurance, and licensing eligibility (as for aircraft pilots) sometimes are factors that should lead to further study.

Patients found to have coronary disease may be managed medically or with a combination medical-surgical program as seems appropriate in individual cases. Those who are found to have normal coronary arteriograms can be reassured by the finding in several studies that normal coronary arteriograms imply an excellent prognosis.[3, 4, 11] Furthermore, if chest pain is the principal complaint, finding normal coronaries should intensify a medical workup seeking other causes of chest pain. Often, when the specter of coronary disease with its implications of heart attack and sudden death is removed, the patient's mind is eased and his physician greatly reassured.

Summary

Patients with symptoms and laboratory or electrocardiographic findings which clearly indicate coronary heart disease should undergo special cardiac diagnostic studies, including cardiac catheterization and coronary arteriography, to determine the suitability of their coronary artery anatomy and left ventricular function for aortocoronary bypass operation.

Indications for these diagnostic procedures and major operation include:

1. Angina pectoris that is unstable, newly developed, crescendo in frequency and severity, or occurring at rest;
2. Angina pectoris that is incapacitating and fails to respond to a reasonable medical treatment program;
3. Angina pectoris and a markedly positive exercise electrocardiogram, implying dangerous, high-grade left coronary artery obstruction;
4. Angina or myocardial infarction in a young person;
5. Angina following a healed myocardial infarction;
6. Symptoms of left ventricular aneurysm (angina pectoris, heart failure, ventricular arrhythmias, arterial thromboemboli).

Patients with chest pain syndromes that are not typical of angina but are nonetheless bothersome and require physician attention, and patients whose resting or exercise electrocardiogram suggests ischemic heart disease, may benefit from further study to establish or eliminate the diagnosis of coronary disease, so that appropriate prognostic advice may be given and necessary treatment undertaken.

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(Continued on page 15A)

Difficult Hernias

Mersilene Mesh in the Repair of Hernias

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THE TERM "HERNIA" is derived from the Latin, meaning "rupture," and frequently evokes in the minds of many the thought of weakness of the structures composing the abdominal walls. It is little wonder that during the past 50 years a number of devices have been developed to aid in strengthening the repair of a rupture.

This discussion will center itself on the usage of one particular prosthesis. Trade-named "Mersilene Mesh," this Dacron synthetic material has a place in the repair of hernias, but its usage must be incorporated into the repair judiciously and not without concern; potential hazards have been known to accompany it.

Approximately two decades ago, tantalum and stainless steel metallic meshes were popular. The initial high expectations for these metallic devices were not met. They were quite rigid initially, and as time passed became friable and ultimately disintegrated. The pliable synthetic materials of nylon, Teflon, and others then came into vogue as prosthetic materials. Each brought with it problems ranging from early loss of tensile strength to excessive granulomatous response.

A polyester polymer from ethylene glycol and terephthalic acid was developed in 1939, and introduced to America in 1946. By the late 1950s, a machine-knitted mesh of this material was developed and marketed by Ethicon under the trade name of "Mersilene Mesh."

Clinical Experience

In the past four and one-half years, 20 patients with ventral herniation have been encountered in Garden City, in whom the caliber of the fascial defect, the attenuated surrounding fascial fibers, or the persistent recurrence of herniation called for a synthetic prosthesis to assure satisfactory surgical repair. Mersilene Mesh was incorporated into the repair. Of the 20 patients, 65 per cent were women and 35 per cent were men. The average age was 60.1 years; the youngest patient was 38, and the oldest 81 years of age. Of this patient population, 35 per cent had had one or more operations to correct recurring herniation. Of the group, 55 per cent were obese and 15 per cent were diabetic. The average size of the defect was 9.8 cm in diameter (96 sq cm),

Mersilene Mesh has been a satisfactory prosthesis to reinforce the repair of 20 ventral hernias. There were no serious complications and only two minor complications.

with the largest measuring 15 × 20 cm (300 sq cm) and the smallest epigastrocele of 2 × 3 cm (6 sq cm). There were no major complications during the operation or postoperatively; however, a 10 per cent rate of minor problems was encountered. There have been no recurrences of herniation where Mersilene Mesh was placed.

Technique

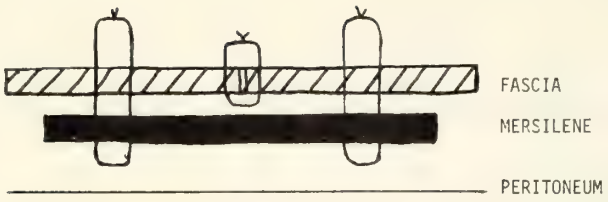
The methods used for implanting Mersilene Mesh have varied considerably in the literature. In each of the 20 cases presented in this study, a piece of mesh conforming to the shape of the defect and with appropriate size was carefully positioned deep to the fascia of the abdomen, as illustrated in *Figure 1.* Interrupted stitches of #000 Mersilene were placed to tack the mesh against the overlying fascia in a buttressing manner. The number of sutures varied with the size of the defect. The sutures were placed so that when the repair was completed, the mesh would be flat and without any folds directly beneath the fascial repair. Interrupted figure-of-eight sutures of either #00 or #0 Mersilene arranged in far-near, near-far technique then apposed the fascia. Finally, the tacking sutures of #000 Mersilene were securely tied.

In some patients, however, apposition of the fascia was not possible due to the caliber of the defect and the resultant amount of tension had fascial fibers been approximated. In these cases an alternative procedure was employed as demonstrated in *Figure 2.* The technique of positioning and suturing the Mersilene was similar to that already discussed. The fascial edges were

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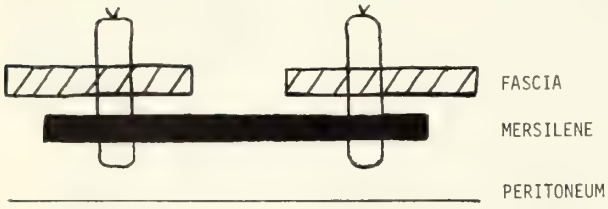
Presented at the annual meeting of the Kansas Chapter, American College of Surgeons, Salina, November 23, 1974.

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SINGLE LAYER UNDERLAY--PRIMARY CLOSURE

Figure 1



SINGLE LAYER BRIDGE BETWEEN FASCIA AND PERITONEUM

Figure 2

not, however, juxtaposed. As time passed, this gap was completely filled with glistening-smooth, tough fibrous tissue incorporated throughout the mesh.

Discussion

It has been pointed out that this prosthesis should be used judiciously and not without concern for its potential hazards.

Richard Adler,[1] in 1962, pointed out the potential problems of draining sinuses, marked subcutaneous seroma collection, and chronic infection that can accompany the use of Mersilene Mesh. Marvin Wagner[2] further showed that, in the canine, a rather marked granulomatous response was encountered when Mersilene Mesh was used. Using Marlex, a somewhat similar synthetic mesh, Jacobs, Blaisdell and Hall[3] reported that postoperative complications occurred in 10 of 20 patients, and that in 9 patients there was a significant accumulation of serosanguineous fluid in the subcutaneous portion of the wound. Usher[4, 5] reported on a larger cumulative study of 541 patients, in whom a 15 per cent complication rate for Marlex was found with the same qualitative distribution of problems as noted in other reports.

Among the 20 patients in our report, there were no major complications and only a 10 per cent minor complication rate. There was one superficial wound infection with no "spitting of Mersilene" and one small (8 cc) collection of serosanguineous drainage at suture removal. In both of these patients the problems resolved quickly



Figure 3

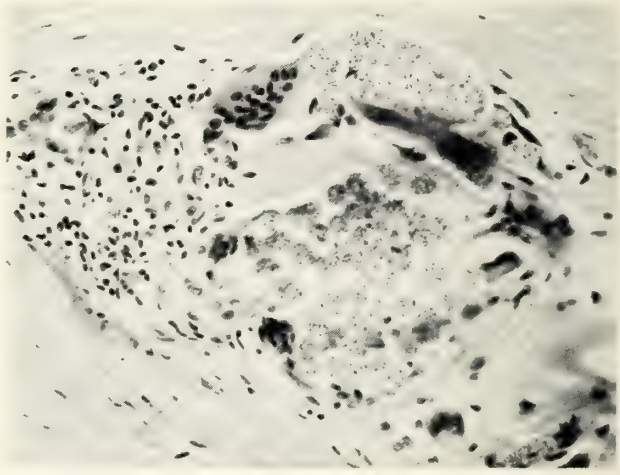


Figure 4

and uneventfully.

Two of the twenty patients have required further abdominal operative procedures, totally unrelated to their previous hernia repairs. In both cases, the Mersilene Mesh was intimately intertwined with a glistening-smooth, tough fibrous tissue. There was a minimum of inflammatory response both grossly and microscopically, as demonstrated in the microscopic sections in *Figures 3 and 4*. In addition, the previously implanted Mersilene Mesh presented no problems in closure of the abdomen, and there has been no recurrent herniation in either of the two patients.

In summary, one might well consider the use of Mersilene Mesh prosthesis in helping to assure a more favorable long-term result in the repair of that hernia if the following preoperative conditions are present:

Large caliber fascial defect,
Attenuation of fascial fibers,
Persistent recurrence of herniation,
Clean wound without gross contamination.

(Continued on page 256)

Acute Care Teams

Ancillary Personnel for Anesthesia and Intensive Care

HUGH S. MATHEWSON, M.D., ***Kansas City, Kansas***

ANESTHESIA and intensive care services are similar in many respects, since continuity is required in all of them and competent personnel must be available at all times. If an individual talent is required of the physician in charge, it is administrative or organizational. There must be a logistic allocation of resources to cover a variable clinical load. The continuous coverage of anesthesia services is a fundamental responsibility. Further, the anesthesiologist has much to offer concerning the specifics of intensive care: airway maintenance, ventilatory assistance, cardiopulmonary resuscitation—the life-threatening problems of anesthesia. Thus, he can participate effectively as leader of a team involved in many areas of critical care management.

We can construct a hierarchy of health care professionals to provide coverage for anesthesia, intensive care, and emergency services. The physician may justifiably occupy the top position on each team. Primary decision making is vested in him, medicolegal responsibility rests upon him, third-party payers remunerate him; there should be no doubt where the administrative impetus must originate. His diagnostic acumen and therapeutic expertise must be comprehensive enough to grasp each clinical situation and master its technical difficulties. Then, by orderly assignment of tasks, he can bring the specialized resources of the health care team to bear upon the urgent needs of the patient. This requires continuing clinical observation, reinforced by a background of study and reappraisal. Since he will be called upon for immediate decisions of vital importance, he must be prepared.

Further, the physician must maximize the effectiveness of each member of the team. This requires the development of mutual professional respect, a measure of recognition of the talents and skills of each contributor. The nurse may assume ownership of the patient's comfort, relief of apprehension and of pain. The therapist or technician can be assured that his skills are not only essential to successful treatment, but are best provided by him. Each member must be made to feel an individual concern for the patient, and a sense of personal satisfaction when improvement is achieved. Physician support and encouragement are necessary to sustain a dedicated and enthusiastic effort from each person on whom the life of the patient depends.

The administration of anesthesia and the care of the critically ill require teams of health care professionals for continuous maintenance of high quality. The organization and training of competent personnel is a substantial part of this effort. The physician must assume a leadership role as head of the health care team.

The ancillary personnel hierarchies suggested here are adapted from a recent statement on anesthesia manpower.[1]

Anesthesia, Intensive, and Emergency Care Teams

The anesthesia care team *(Table 1)* is headed by the anesthesiologist, with the certified nurse anesthetist occupying the next station. The controversial position of the anesthesiologist's assistant has yet to be resolved. It is presently supposed that if anesthesiologists and nurse anesthetists can provide the continuity and logistic capability required of anesthesia in this country, they will occupy these positions alone, and a third group will not develop.

The definition of an anesthesia technician is even more nebulous. Presumably such a person would resemble a respiratory therapy trainee. The educational program would either lead to an A.A. degree, or this would be prerequisite to admission to the school. Much clarification is needed to determine the clinical limitations of this group. Some of the basic aspects of clinical care in the operating room, such as the administration of transfusions, are difficult to evaluate. Beyond the general function of looking after anesthetics under the supervision of a physician or nurse anesthetist, the role of the technician is undetermined.

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Presented at the annual meeting of the Kansas Society of Anesthesiologists, Hutchinson, September 28, 1974.

TABLE I

ACUTE CARE TEAM—*ANESTHESIA*

Position	*Degree Level or Equivalent*
Anesthesiologist	M.D. and Board or College
Nurse Anesthetist	
*Anesthesia Assistant	B.S. (4 or 5 years)
*Anesthesia Technician	A.A. (2 years)
Anesthesia Aide	On-the-job trainee

* Proposed.

TABLE II

ACUTE CARE TEAM—*INTENSIVE CARE UNIT*

Position	*Degree Level or Equivalent*
Anesthesiologist	M.D. and Board or College
Acute Care Nurse	B.S. (4 or 5 years)
Respiratory Therapist	
Acute Care Technician	A.A. (2 years)
Respiratory Technician	Certificate (1 year)
Recovery Room and Acute Care Aide	On-the-job trainee

The role of the anesthesia aide is more understandable, since there already are many persons who can be so identified—the on-the-job trainees responsible for maintenance duties. Generally, the aide functions apart from the patient, and is supportive only to those administering anesthesia. In a catastrophic situation with multiple casualties, such an individual could, with proper training, engage in many activities beyond ordinary expectations. The preparatory measures for surgery, administration of plasma and fluids, and manual assistance in anesthetic management might be reasonably provided by the aide under exceptional circumstances. Competence can be assured only by prior indoctrination in the team concept and specific orientation toward anesthesia care procedures.

Intensive care can be viewed as a parallel situation. *Table II* lists the anesthesiologist as the team leader, although other specialists engaged in the care of life-threatening conditions may do as well. The role of anesthesiologist as intensivist may be questioned,[2] yet there is little doubt that his general qualifications are equal to those of the others. The acute care nurse occupies the position comparable to the nurse anesthetist, one with special expertise in such areas as coronary or respiratory care, whose skills can be brought directly to bear on the problems of the critically ill. These can include endotracheal intubation, intravenous therapy, arterial puncture, and ECG interpretation.

The respiratory therapist or the acute care technician would follow in this hierarchy. Both have A.A. degree level education, and a registry or credentialing certificate to establish their positions. At present, the National Board of Respiratory Therapy (N.B.R.T.) is the single certifying body in this specific field, but other acute care specialties are less well defined. Only those underwritten and supported by governmental health agencies are likely to survive. The respiratory technician, also defined and certified by N.B.R.T., is subordinate to the therapist. Both can be looked upon as levels on a vocational ladder; the technician may aspire to therapist status, and qualify for this promotion by fulfilling additional educational requirements. Again, it is worthy of emphasis that overextension of personnel in emergency situations may press the technician into services ordinarily reserved for the therapist, and that this eventuality should be anticipated.

The recovery room and acute care aide exemplify persons who appear with an interest in intensive care and who demonstrate reasonable compatibility and effectiveness in these areas. They are trained on the job to perform limited tasks related to supply and equipment maintenance rather than to patient care.

Finally, a comparable hierarchy is suggested for the emergency room *(Table III)*. Here one may expect to find more individuals in the lower echelons, where manual transport of patients and resuscitative paraphernalia are more often required. The size of the emergency service may encompass a broad range; it may be the largest in the hospital or it may be virtually nonexistent. But there must be emergency service in the community and intensive care specialists engaged to assume charge of it. Perhaps a group of physicians on the service can provide continuity by rotation; these can be anesthesiologists. The emergency care nurse is comparable to the intensive care nurse, but with additional administrative and organizational functions which reflect the wide fluctuations in patient volume. The effective allocation and assignment of tasks to technicians and aides may be urgently necessary during busy periods, and the ensuing results of treatment may depend mostly on the

TABLE III

ACUTE CARE TEAM—*EMERGENCY ROOM*

Position	*Degree Level or Equivalent*
Physician	M.D. and Board or College
Acute Care Nurse	B.S. (4 or 5 years)
Emergency Care Technician	
Respiratory Therapist	A.A. (2 years)
Emergency Care Aide	
Ambulance Service Aide	On-the-job trainee

abilities of physician and nurse to supervise, to utilize personnel with maximum efficiency, and to cope with problems of overload.

The emergency care or ambulance service aides occupy a controversial area. What may be expected of them at the scene of an accident is almost impossible to define. Educational programs for ambulance personnel have been organized, which represent the only rational approach to supervision of their activities outside the confines of the hospital. Ideally, they must possess all the skills of the intensive care physician, which can hardly be approached. What falls within their capabilities should be carried out under supervision; beyond communication with physicians and nurses the results of their efforts will be largely fortuitous. Nevertheless, the problem must be faced that resuscitation must often be carried out on the spot, and the skills of the aide may represent the only hope for a successful result.

Technology

An important aspect of intensive care is the operation and maintenance of equipment. While mechanical skills are often disdained by the physician, the fact remains that many recent advances in clinical care have followed the appearance of sophisticated machines, either to perform new diagnostic tests or to supplement vital functions. A significant factor in the recognition of anesthesiology as a distinct specialty was the development of the gas machine, a device of sufficient complexity to set apart those expert in its use. Of equal importance was the mechanical ventilator, which was largely responsible for the emergence of respiratory therapy as a separate discipline. Similar specialty groups have arisen to operate machines which perform cardiopulmonary bypass and hemodialysis.

The mechanical devices which take over the functions of the heart, lungs, or kidneys are reserved for the seriously ill. Their employment is confined to intensive care areas, and their effectiveness often depends on considerable mechanical ingenuity and skill. Often, the same diagnostic acumen applied to physiologic disturbances in patients must be called upon to rectify unphysiologic functioning of the ventilator, the membrane oxygenator, or the dialysis unit.

Therefore, distasteful as it may be to the medical expert, he must acquire a complete and intimate knowledge of these life-saving devices. It is a continuing and limitless quest, since new refinements and breakthroughs are certain to be developed. In contrast to the physician's constant object of study—man—the new machine can be a strange and exotic species, reflecting the thought patterns of the engineer-inventor. Like it or not, the effective clinician must be enough of a mechanic to adjust an oxygen regulator or the heating unit of a humidifier, or find the source of malfunction in a volume ventilator.

A whole group of "men Friday" have sprung up in the intensive care environment, who provide the mechanical skills necessary to the operation of life-protecting machines. Often their salaries are far beyond their educational stations, but they provide an indispensable skill, and their presence at times of crisis due to equipment malfunction saves many lives. However, their attention is often directed primarily to the machine rather than to the patient. While they are skilled artisans, they are not physicians, despite their familiarity with hospital procedures. It is to their credit that most of them recognize these limitations, and achieve a cooperative synergism with their medically trained associates. Recognition of their worth has stimulated the development of technician programs, where the study of equipment is supplemented by some information on the pathologic processes it is designed to correct, and the physiologic changes which may be imposed. While this does not make them diagnosticians, it gives them an introduction to the point of view of the physician, and some familiarity with his vocabulary and syntax. The technician can then look away from the machine, and with the physician view the problems of the patient with increased understanding and mutual helpfulness.

Training the Intensive Care Team

Continuous coverage of intensive care services requires the maintenance of a full complement of trained personnel. Selecting and keeping individuals of high quality is a recurring problem. Most of all, the *esprit de corps* must be sustained at a superior level, and the enthusiasm for patient care continued unbroken. The team must often be built from trainees who have attained expertise in specific skills, but who have not yet achieved the sense of professionalism essential to consistent performance. This can be accomplished by a systematic ongoing program of education designed to reinforce the necessary attributes of dedication and high purpose.

It may be helpful to review the attributes of a health care professional. First, he (she) knows basic medical principles well, especially those precepts relating to the intensive or emergency care areas where he is a participant. Second, he exercises sound clinical judgement, forthrightly and without hesitation. Third, he circumscribes his capabilities and limitations, and is aware of his position relative to other medical personnel. Fourth, he understands team performance, the integrative efforts necessary to accomplish the complex and difficult procedures often required in critical care management.

The most effective program is primarily aimed at quality assurance. Other aspects of curriculum planning may be directed toward accreditation or certification, but

the emphasis on clinical performance should remain foremost. The care module will include the basic principles of respiratory therapy, cardiac intensive care including cardiopulmonary resuscitation, and the management of acute trauma. All common emergency situations should be illustrated with complete case studies. Attention is focused on whole patient treatment rather than specialized aspects, thus orienting each member to team concepts. A systematic effort must be made to select and "write up" cases worthy of detailed examination. The chief beneficiary of such an effort is the individual who prepares the protocol.

The goals and objectives of this educational process may be summarized as follows: (1) The hospital based health care professional will learn the basic medical principles on which emergency diagnosis and treatment are based; (2) He will be able to identify all common life-threatening situations where immediate clinical decisions must be made; (3) He will demonstrate an orderly sequence of steps in management of a patient *in extremis;* (4) He will know and be able to describe in detail the position and function of each team member.

References

1. Ament, R.: Manpower planning for future delivery of anesthesia care. *Anesthesiol. Rev.* 1:11-15, 1974.

2. Boutros, A. R.: Anesthesiology and intensive care. *Anesthesiol.* 41:319-320, 1974.

KMS MEETINGS 1975/76

October 19 (Sunday)	*Manhattan*	Executive Committee	10:30 a.m.
	Manhattan	Council Distr. 5	12:00 noon (luncheon)
	Manhattan	Council	1:30 p.m.
20 (Monday)	*Salina*	Council Distr. 9	6:00 p.m.
November 4 (Tuesday)	*Wichita*	Council Distr. 11	6:00 p.m.
16 (Sunday)	*Lawrence*	House of Delegates	9:00 a.m.
	Lawrence	Council Distr. 18	12:00 noon (luncheon)
18 (Tuesday)	*Kansas City*	Council Distr. 2 & 3	6:00 p.m.
November 28-December 6	*Hawaii*	AMA Clinical Session	
January 5 (Monday)	*Topeka*	Council Distr. 6	6:00 p.m.
18 (Sunday)	*Emporia*	Executive Committee	10:30 a.m.
	Emporia	Council Distr. 7	12:00 noon (luncheon)
	Emporia	Council	1:30 p.m.
February 20 (Friday)	*Topeka*	Executive Committee	6:30 p.m.
22 (Sunday)	*Topeka*	Auxiliary Officers	
March 21 (Sunday)	*Wichita*	Commissions	10:00 a.m.
	Wichita	Executive Committee	1:30 p.m.
April 11 (Sunday)	*Great Bend*	Executive Committee	10:30 a.m.
	Great Bend	Council	1:30 p.m.
May 2-5	*Salina*	117th Annual Session	

The President's Message

Continuing Medical Education— An Obligation and an Opportunity



Dear Colleagues:

The privilege of continuing membership in the Kansas Medical Society is now contingent upon the completion of at least 150 hours of accredited continuing medical education every three years. Such a requirement recognizes that it is not likely that a physician is going to be able to offer the best care to his patients and be a continuing credit to his profession unless he fulfills these minimum requirements specified by the KMS House of Delegates as a condition for membership.

Continuing medical education in a variety of forms is part of the life pattern of every conscientious physician —and very much in the best interest of our patients, the profession, and the public at large. Our willingness to demonstrate and document that this initiative has a broad base within the medical profession will dispel a great many of the false concepts, and sophistic arguments which are thrown against us by those who would subjugate the medical profession to bureaucratic domination in the name of social good or for personal political gain.

The vast majority of physicians are dedicated professionals whose dominant motivation is the needs of the patients they attend. From our conviction on this point it follows that the continuing medical education requirement of the KMS should work no hardship, except on those who are not willing to keep up, and a very few individuals faced with special difficulties for which the system takes account.

The action of the KMS in establishing continuing medical education as a minimum requirement for membership is hardly unique, or pioneering, for an organization which purports to represent a profession proud of its scientific advances and the ability of its members to translate those advances into the most modern methods of patient care. In fact, many of our component specialty societies—notably the Kansas Academy of Family Physicians—have had such minimum requirements for membership for many years. Our colleagues, the osteopaths, have had such a standard for a long time.

In the eyes of the consumer-oriented public and their legislative representatives, the granting of a license to practice medicine on graduation from medical school, or the passage of a onetime examination provides little or no assurance that a physician will still be competent 20 years hence. There is already authority vested in the Kansas State Board of Healing Arts to relicense physicians on some credible basis—and increasing pressure on the Board to use that authority. For the sake of avoiding both costly duplication of recording and a different set of standards (possibly including some form of periodic "reexamination"), we are urging the Board of Healing Arts to recognize certification by the Kansas Medical Society of the compliance of individual physicians (both members and non-members) with the requirement for 150 hours of bona fide continuing medical education as the primary basis for continuing medical licensure in Kansas.

Coerced, mindless, physical presence at continuing medical education courses is not the objective of the Kansas Medical Society. One of the obligations incumbent on us is to find ways in which continuing medical education can be made more effective. If it is to serve the needs of patients and physicians, it must undergo some dynamic changes. Rather than argue about a minimum demonstration of personal educational initiative as a condition for membership, let us turn our attention to the more positive objective of making continuing medical education more meaningful to each of us in our conduct of patient care. Our failure to do so would constitute an open invitation to the state and federal bureaucracy to devise an alternative bound to be far more onerous.

Fraternally,

John W. Travis, M.D.

President



The Proud Man's Contumely

Several weeks ago, one of the staff writers for *The National Observer* presented a commentary headlined, in bold face type, "The Arrogance of Physicians." The writer, it seems, had been a witness in a public eating place to the vociferous complaints of a surgeon who was objecting to the efforts of a patient's family to get some information about the patient. The surgeon made it clear to his companion—and, apparently, to those all around—that he was annoyed with them and didn't have time to bother about such things. As one might expect, this prompted the writer to a blanket condemnation of the medical profession as arrogant. True, he acknowledged that his own physician was not so, but noted that he had dismissed several of that type before discovering this uncharacteristically modest individual.

There is no reason to doubt the occurrence as reported and, assuming its validity, there seems no doubt that the surgeon did act in a boorish and obnoxious manner. We don't know, of course, just what kind of a day he had had—perhaps one of those that comes to all physicians on occasion when the milk of human kindness is thoroughly curdled. We don't know, of course, how much information he had already offered the family—whether they did, as some do, encroach unreasonably upon the surgeon's time and (sometime) good nature—whether they were capable of understanding the technicalities of what they had been told. What we do know is that, unfortunately, the surgeon happened to give vent to his feelings within earshot of a journalist gifted, apparently, with the power of total recall as well as access to publication.

If our commentator had noted that the medical profession *seemed* arrogant, we would have disliked his interpretation but could not have questioned his right to his opinion. Since he chose to say it *is* arrogant, we take strong exception—even suggesting that his comments qualify, to our prejudiced interpretation, as arrogant (though we judiciously avoid saying that all journalists are arrogant). The fact of the matter is that the public in large proportion does consider the medical profession arrogant—if not all physicians all of the time, *some* of them all of the time and too many of them some of the time. Objectivity requires that we note that some physicians *are* arrogant but we can discount them as representative of the profession, since they would be arrogant whatever their activities. At the same time, there are arrogant individuals in every other trade, business, or profession. We can even suggest that there is a place for the arrogant physician since some patients like it that way. To paraphrase the aphorism on greatness, some physicians are born arrogant, some achieve arrogance, and some have arrogance thrust upon them.

On a semantic level, "arrogance" relies upon a concept of authority or superiority. If we express these qualities in an offensive manner, we are, *ipso facto,* arrogant. Now the physician is—and should be—an authority, not just in medical knowledge but as much in determining and controlling the course of action in the case. Without authority, he cannot fulfill his obligation to the patient or the family—as any physician learns if he loses that authority to another. This is not to exclude the patient from a part in the determination of the optimum course, but the regulating authority must be the physician's. And his authority must be based on superiority—superiority in understanding the process and the patient. Thus is the physician placed in constant exposure to the contamination of arrogance. Even as these qualities are not to be surrendered, at risk of diminishing the physician's effectiveness, their arrogant expression can render him more vulnerable to legal action by producing an alienated patient.

It must be admitted that the medical profession does endow itself with a high degree of self-esteem. It is fond of alluding to the years of preparation, the long and demanding hours of service, the depth of responsibility (all, of course, voluntarily assumed) no one of

which is false but any one of which can easily emerge as arrogance. Self-esteem may be the fully justified recognition of ability or it may be compensation for a sense of inadequacy in confronting an enormous task, but between these limits it covers just about all of us. Whether the cloak of self-esteem covers the nakedness of inadequacy or protects the fabric of capability, the wearer determines whether the style is healthy and confidence-inspiring self-respect, or garish and repelling arrogance.

We may be witnessing another example of suffering as a result of our successes. In the day when there was less to offer of sophisticated diagnosis and definitive therapy, and the essence of medical service was direct personal concern and involvement, it was perhaps less easy to present an attitude of overbearing. Today, even as the patient expects instant diagnosis and miracle therapies, the physician brooks no interference or questioning of his dictates. The attitude that his knowledge, interpretation, and actions are to be accepted without question or qualification may have some scientific justice but may create an unfortunate social relationship.

This brings us to what is probably the prime factor in transforming the necessary and desirable features of authority and superiority into a state which offends the patient and debases the profession—that old bugaboo, communication. Not only must the physician work in an area which puts him in constant risk of seeming arrogant, he must contend with certain practicalities which enhance the risk. The chronic insufficiency of time which characterizes the physician's day means that he must frequently give the patient less time than either would like and, in order to get the essentials in, he may easily and unintentionally utilize an abrupt attitude which the patient interprets as arrogance. There can surely be no physician who has not discovered at some time that he offended a patient, though he was totally unaware of it at the time. Lack of availability, perhaps unavoidable or unintentional, perhaps intentional simply as a protective measure, tells the patient that the physician is disdainful of his needs. The physician's judgment that he did not act arrogantly is moot since he is not making the judgment.

Again, he must daily translate complex and technical matters into terms intelligible to patients and their families—through a cloud of tension and anxiety in which they are wrapped. How readily, in desperation, does he resort to an approach that is interpreted by the patient as a put-down. And again, the professional attitude that only the physician can judge the monetary value of his service may seem at least arrogant if not downright dishonest, unless it can be justified to the patient by direct communication.

Well, a sequel of sorts can be recorded. Reader response to the commentary, as carried in a subsequent "Letters" column in the paper—and presumably reflecting a balance of the feelings expressed, was about evenly divided. That is, defenders of the profession just about equalled supporters of the writer and, while a tie is generally considered an unsatisfactory result, it is almost heartening in these days in which the physician's image seems a permanent entry in the social demolition derby. But it's worth noting that the defenders of the profession all cited their experiences in which physicians by word or action—often without realizing they were doing it—expressed interest and concern, not arrogance and disdain. So, while it was probably not the writer's original intent, perhaps we picked up a few points after all.—*D.E.G.*

KANSAS MEDICAL ASSISTANTS SOCIETY

All Kansas physicians are asked to encourage their medical assistants—receptionists, bookkeepers, technicians, secretaries, nurses—to become active in the Kansas Society of Medical Assistants. There are 21 component chapters of KMAS, with almost all areas having a chapter within driving distance.

The sole purpose of KMAS is education—to further the skills of medical assistants in physicians' offices. All chapters have regular, educational meetings; many chapters have special educational programs for the purpose of certification in medical specialties or secretarial skills.

Please talk with the assistants in your office and let them know that you endorse KMAS and its aims. If your assistants already belong, let them know you support their organization.

Information concerning KMAS may be obtained from the nearest chapter, or from Marylin Young, Membership Chairman, KMAS, 827 East 36th St., Topeka 66605.

Kansas Foundation for Medical Care, Inc.

Soc et Tuem

The following is a policy statement made by the New Jersey Foundation for Health Care Evaluation at the annual meeting of the American Association of PSROs. This statement was adopted as policy by the AAPSRO on August 10, 1975. We have expressed our approval and commendation to the NJFHCE for this excellent statement of the situation with which we are faced in trying to implement the PSRO program.—*J.E.A.*

Policy Statement

"The response by physicians of New Jersey to the challenge set forth in Section 249F of P.L. 92-603 was energetic, sincere, and genuine. By generously donating their time and knowledge, New Jersey physicians quickly formed a statewide medical foundation and PSRO organizations in each of our eight areas. Medical organizations contributed seed money to help the core groups get started.

"Those of us who accepted this challenge did so in a genuine belief that peer review is the best way to assure the quality of medical care, and that physicians were being given the opportunity and responsibility to conduct real peer review. For our efforts, we often gained not applause but brickbats from colleagues accusing us of subservience to government control and abandonment of the traditional independence of the physician to stereotyped mediocrity. Such attitudes can be attributed to a lack of understanding of the original stated intent of the legislation, as well as to failure of recognition that the developing PSROs represent the physicians themselves.

"The fledgling PSROs looked toward the day when they would be able to provide genuine service to patients and colleagues in providing guidance and assistance to all concerned in their local areas. They approached this task with eyes open, and with some misgivings. They accepted Senator Bennett's principles that the targets were assessment of quality, necessity and appropriateness of care, and that the parameters would be measured against local standards and criteria. They expected that the autonomy of each local PSRO would give it flexibility in dealing with the doctors and institutions in its area, so that procedures would be developed and altered as experience was gained. It was not the intention of these pathfinders to establish a rigid nationwide structure concerned solely with cost control, nor indeed was this the intent of the legislation.

"Thirty months later, we find ourselves entangled in a web of regulations, transmittals, contracts, confusion, and delays.

* The beacons of flexibility and autonomy grow dimmer and dimmer when viewed through the accumulated relevant pages of the *Federal Register* and multiple Transmittals.

* The image of Senator Bennett has set below the horizon.

* Underfunding has retarded growth and development, by intent or accident. Recession and inflation take the blame, but are the fiscal problems merely excuses for de-emphasis?

* There is increasing disillusion in the ranks of physicians fighting the battle for acceptance of PSRO. Despair and dismay thin the ranks while the fires of opposition increase. With faith and trust in the original federal promise shattered, cynicism is winning. Should physician cooperation die, any hopes for a meaningful program fades, and we are left with a rigid, federally imposed sterile system.

* The 'new' regulations caused much concern: Are they truly the same as PSRO? If so, why are they necessary? If funds were scarce, why not start one program properly, rather than two? Why not let PSRO develop as originally planned—*or,* is PSRO designed to fit *into* the regulations, and not vice versa?

* Guidelines, rules, and definition are becoming more detailed and specific as time goes on. Despite assurances to the contrary, the spectre of rigid nationwide regimentation will not go away (and nothing would be more detrimental to medical care at the local level where it really counts).

* Instructions and proposals permit very little time for response—adequate analysis and consultations are frequently not possible.

* Lack of clear leadership leads to confusion (and potentially to mutiny). The various divisions of HEW—SSA, SRS, OPSR—do not seem to be marching to the same drum. Do all branches believe in the value of PSRO?

* Lack of authority by regional offices hampers PSRO operations. The regional officers are conversant with the personnel and conditions affecting PSROs in their spheres of influence. Reason and logic indicate that they should have increasing authority to make decisions about policies and services. It sems ludicrous to contact Rockville, Maryland on a matter much more familiar to a person in New York City.

* Lack of clear policy on matters of great concern to

physicians is a serious deficit at this late date. The matters are confidentiality, medical liability under PSRO and new regulations, and physician reimbursement for mandatory utilization review. These are major points in 'selling' these programs to physicians; they often gauge the sincerity of the advocates on their attitudes on these points.

"We therefore make the following policy recommendations:

1. Change from cost reimbursement to a system more compatible with PSRO funding, such as grant funding procedures.
2. Decentralize administrative activities by giving regional offices more authority.
3. Return control of PSRO operations to physicians at the local level, as provided in the law. PSRO operations should be controlled neither by state agencies (who are not physicians' peers), nor by HEW bureaucrats.
4. Provide funds to reimburse physicians for their time spent in mandated activities of PSRO, utilization review, establishment of criteria and standards, and the like, recognizing the countless hours already donated by many physicians.
5. Assure that regulations and policies emanate from a single agency, rather than multiple sources.
6. Grant the emerging PSROs some degree of autonomy and flexibility in arranging their local operations. This will be a strong point in 'selling' PSRO membership and participation to the physicians in the area.

"In summary, we ask that the original legislative intent be restored to the program; that SRS, SSA, and OPSR get together on methods and goals; that PSROs be allowed to succeed (or fail) on their own initiative and efforts; that *quality* medical care be the goal; and that less rigidity would permit the flexibility and autonomy which was promised.

"It is hoped that the good intentions and spirit of cooperation do not disappear in the 'Rockville Triangle' (Baltimore, Washington, and Rockville) and that, with a little more faith and trust in the good judgment of the majority of America's physicians, a peer review system will be established of which we can all be proud."

Interim Session

of the

KMS HOUSE OF DELEGATES

Sunday, November 16, 1975–9:00 A.M.

Hilton Inn, Wichita

One-day business meeting to consider items relating to legislation and others that cannot be delayed until May. It is hoped all component societies will be represented by their full complement of delegates.

All members of the Society are invited.

ALL RESOLUTIONS MUST BE SUBMITTED TO THE KANSAS MEDICAL SOCIETY NOT LATER THAN OCTOBER 15, 1975. THEY WILL BE REPRODUCED IN SUFFICIENT QUANTITY TO PASS OUT TO THE DELEGATES AT THE MEETING.



Open Letter to the Doctors of Kansas

Your Auxiliary has many concerns. As I mentioned last month, we are glad to be working with you on the problem of professional liability. Now we, along with many other organizations in Kansas, are joining you in promoting Immunization Action Month in October. It is encouraging to read that the combined efforts of all organizations made a noticeable difference last year in the percent of immunized children between the ages of 1 and 4. But there are so many thousands yet to be immunized that we dare not relax our efforts. We are alerting our members to exert every effort to promote this campaign; we are sure that each of you will do all you can to promote immunization in your own communities.

At the AMA convention in June, our Kansas chairman accepted the AMA-ERF Merit Award for 1974, for having contributed to that fund in excess of $15 per member (the actual amount given was $19.75). Our new co-chairmen of AMA-ERF are eager to continue the good work, and have set a goal of $20 per capita. They remind us that this money is needed for medical education and research more than ever; both KUMC and the Wichita Branch need our money. We are counting on you to continue your loyal support in such various activities as the family Christmas card, the group-sharing Christmas card, professional art auctions, watch sales, Indian jewelry (where 40% of the amount sold represents an AMA-ERF donation), and many other fund raising activities.

Fall activities of the Auxiliary began with a whirlwind visit to several Auxiliaries in southeast Kansas for dinner, teas, and coffees. We were graciously received, and the meetings proved to be most helpful and pleasant for our team of officers. This gave us a chance to get acquainted and spread the word about Auxiliary concerns.

The Fall Conference, with business and a varied program of information and inspiration, will be held in Denton, October 22-23. We will be assisted by some of the doctors of the Kansas Medical Society, who will tell us more about your efforts in the field of professional liability. We appreciate your help and cooperation in this.

We are proud of the great potential in our membership of talented and dedicated ladies.

Sincerely,
Anita Yoder
President,
Woman's Auxiliary to the
Kansas Medical Society

Journal on Microfilm

Microfilmed copies of current as well as all back issues of the JOURNAL are available through University Microfilm Services, a subsidiary of Xerox Corporation. The 35 mm film fits all standard viewers and provides the JOURNAL in miniature at a savings on binding and storage costs. Write for information or send orders direct to University Microfilm Services, 300 North Zeeb Road, Ann Arbor, Michigan 48106.

Vox Dox

Dear Vox Dox:

The recommendations of the Malpractice Committee of the Kansas Medical Society are probably the best that can be reasonably hoped for in today's political climate, given the fact that legislatures are composed mainly of lawyers, and given the fact that generally anti-physician communications media determine public opinion. However, these recommendations should be only an interim step. I have two specific suggestions to make.

In the first place, contrary to the political currents of the time, it must become a matter of public record and of national policy that the individual is responsible for his own life. Therefore, the ultimate defense against "malpractice" which is really only statistical bad luck, is the totally informed consent. The drug companies should devise package inserts readable by an 11-year-old, since that is the average level of reading competence in this country today. These inserts should list all of the complications of each drug that occur more frequently than 1 time in 100, described in lay terms. Lethal complications that occur less than 1 time in 100 should also be listed. The form should say in so many words that it is presumed that the patient will read this form before consuming the drug, and that the patient has been made aware by his physician of the risks of *not* taking the medication. The handout will inform the patient of the risks of *taking* the medication. The patient must be told that it is up to him to decide whether he wants to take the medication, knowing the risks of taking it versus the risks of not taking it. If he takes the medication, the results of the decision are his responsibility and nobody else's. Similar forms should be drawn up by physicians or by specialty organizations to cover all ordinary surgical and therapeutic procedures and should be given to the patient. It is true that this is cumbersome, but so are the alternative procedures devised, and this procedure has the virtue of emphasizing to every patient that he is responsible for his own life, and that he cannot absolve himself of responsibility by casting himself into the arms of a physician, a hospital, or a lawyer. It is true that this flies in face of current social ideology, that ideology that teaches us that everything from impotence to murder and riot is the fault not of the individual but of society's failure to make him happy. Still, if New York City serves as nothing else, it should serve as a living example of the fact that society cannot afford to live that way.

Secondly, if the decision is allowed to stand that any bad result of any form of therapy is compensable, then there must be public recognition of the fact that this has nothing to do with malpractice, but is simply a form of social security. Therefore, the premiums should not be borne by the physician and his patients who pay his cost of doing business, but by society at large, as another lug on the already immense pile of social security taxes. It is true that this may be unfeasible. However, it has the virtue of being honest.

The remaining, small area of true malpractice can and should be handled with the system modifications proposed by the Kansas Medical Society.

James W. Wiggs, M.D.
2015 Forest Avenue
Great Bend, Kansas 67530

INSTITUTIONS ACCREDITED FOR CONTINUING MEDICAL EDUCATION CREDIT

In addition to the Hertzler Foundation and Halstead Hospital, Halstead, three other institutions have been accredited in Kansas for Category I credit in continuing medical education programs.

The Continuing Medical Education Committee of the Kansas Medical Society has granted provisional accreditation to Wesley Medical Center, Wichita; Lawrence Memorial Hospital, Lawrence; and Shawnee County Medical Foundation, Topeka. Educational programs presented by these institutions can apply for Category I credit if they meet other AMA requirements for that particular category.

Other institutions interested in being surveyed for continuing medical education programs should apply to Mr. Gary Caruthers, at the Kansas Medical Society Executive Office.

AMA House of Delegates

Summary of Actions Taken at the 124th Annual Convention, Atlantic City, New Jersey, June 14-19, 1975

The following report was prepared and submitted to THE JOURNAL by Alex Scott, M.D., Junction City, and Clair C. Conard, M.D., Dodge City, AMA Delegates from Kansas, who both attended the meeting in Atlantic City, appeared before the reference committees, and acted upon all the business submitted to the House.

In the most momentous session to be held in decades, delegates at the 124th convention urged vigorous AMA action in a number of medical problem areas—including malpractice and federal intervention—and then approved a substantial dues increase to assure the necessary financial support.

Meeting for 22 hours and 37 minutes, the longest convention in recent memory, the House acted on 73 reports and 168 resolutions for a total of 241 items of business.

Repeatedly emphasizing stronger AMA involvement in confronting problems facing local physicians, an overwhelming majority of the House voted to raise annual dues of regular members to $250, intern-resident dues to $35, and to maintain student dues at $15.

Elections

Delegates selected Richard E. Palmer, of Alexandria, Va., as president-elect. Others elected or re-elected to positions in the Association were:

Vice-President: George W. Slagle, Michigan

Speaker of the House: Tom E. Nesbitt, Tennessee

Vice-Speaker of the House: William Y. Rial, Pennsylvania

Trustees, for three-year terms: Joe T. Nelson, Texas; Robert Hunter, Washington; Jere W. Annis, Florida; Joseph M. Boyle, California. For the unexpired two-year term of Richard E. Palmer, named President-Elect, Lowell H. Steen, Indiana.

Dues Increase and Related Priorities

In increasing annual dues of regular members from $110 to $250, delegates also served clear notice of a new and aggressive stance by the AMA in dealing with the many problems facing the nation's physicians.

In just one of the problem areas discussed—malpractice—the House called for the AMA to take immediate actions to help ease the crisis, including the formation of an AMA-sponsored professional liability reinsurance company. The company will provide backup or second-level coverage for those state medical societies that have sponsored their own medical liability insurance programs.

Meanwhile, delegates unanimously endorsed a substitute resolution applauding the recent suit filed by the AMA against HEW regulations which mandate post-admission certification of hospital patients, and left no doubt that a primary reason for approving the dues increase was to provide fiscal support not only for the present suit, but for similar actions as well. Thus the second resolve of the resolution reads:

"That the Board be encouraged to continue to take such action in the future on further legislation or government regulations that threaten the ability of physicians to provide quality medical care to patients."

The House was appraised of the fact that Trustees have instructed the AMA Office of General Counsel to lay the legal groundwork for possible suits against the new federal health planning program, HEW regulations for the proposed "Maximum Allowable Cost" purchase of drugs, and for objectional features of proposed health manpower legislation should those features be enacted.

In other priorities related to the dues increase, the House called for continuing efforts to rebuild the AMA on a sound financial basis, and strongly supported a reshaping of the AMA publishing program, as well as a restructuring of the organization itself.

By adopting the $250 dues level recommended by the Board, the House was assured that depleted financial reserves would be restored, that present programs would be continued, and that additional programs—such as those for malpractice and to combat growing government presence—would be mounted. In related actions, the House called for:

—Balanced budgets in both accounting and program formats;

—Intensified membership recruitment and retention efforts;

—Continued administrative support of AMPAC;

—Annual reports on the status of AMA fixed assets and investments.

Advertising-Publications

Acting on further information provided by the Special Committee of the House appointed at Portland last

December, delegates endorsed "a policy of aggressive advertising promotion" in AMA publications and asked the Board to implement this policy at the earliest possible time.

In other actions, the House urged that the 10 specialty journals be placed on a self-sustaining subscription basis, or that appropriate arrangements be reached with the specialty societies involved.

Upon questioning by trustees, however, the House made it evident that it will be left to the Board to determine the eventual fate of *Prism,* so long as the disposition is to the financial advantage of the AMA. In short, *Prism* could be sold, or it could be continued if it could be put on a paying basis.

The House also authorized the Board to set subscription rates for all publications—including *Today's Health* —excepting only *JAMA* and *American Medical News.*

In other actions on Association and Internal Matters, the House:

—Adopted a resolution to permit newly-elected delegates to begin their terms on January 1 or on July 1, at the discretion of state societies.

—Amended the delinquency provisions of the Constitution and Bylaws to include future assessments, as well as dues.

—Urged constituent societies to provide full membership privileges for medical students at nominal dues.

—Approved a set of model membership bylaws for distribution to constituent societies.

—Asked the Board to consider the establishment of a Section on Nuclear Medicine through appropriate mechanisms.

—Endorsed the reestablishment of AMA-AMPAC workshops on a self-sustaining fiscal basis.

Reimbursement Under Government Health Programs

The House strongly reaffirmed the AMA's long-standing position that physicians participating in government health insurance programs should be reimbursed on the basis of usual, customary, and reasonable charges.

In a further step, Delegates requested the Council on Medical Service to examine the Medicaid and Medicare programs to see if reimbursement did meet AMA policy, and to report back at the Honolulu Clinical Meeting.

The House also adopted report JJ of the Board, which updates Board actions in objecting to the proposed payment of usual, customary, and reasonable Medicare fees based on a national economic index as recently promulgated in regulations published in the *Federal Register.* The Board report emphasizes continued and vigorous opposition to the proposal including legal action, should it become necessary.

Federal Health Planning Program

The House unanimously supported the Board in its recent actions to oppose implementation of the National Health Planning and Resource Development Act enacted by the last Congress. The delegates pledged support for "any action, including legal action," that the Board deems appropriate and effective in preventing implementation of the new planning law.

PSRO Policy Reaffirmed

Delegates reaffirmed present AMA policy on PSROs, and defeated a call for repeal of the PSRO law. After discussion in reference committee and on the floor of the House, delegates reaffirmed PSRO policy adopted at the 1974 Annual Convention.

The policy basically calls for AMA action to seek constructive amendments to the law and appropriate regulations and directives, and to support continued monitoring of the program. The policy also holds that should the PSRO program become too restrictive, however, the Board can seek repeal. And here again, the House cited the possibility of legal opposition if it becomes appropriate.

Other House recommendations related to Physicians and the Government included:

—That the AMA seek repeal of an amendment to federal law which equates psychologists and optometrists with physicians in the provision of medical care to government employees under health insurance programs.

—That the AMA seek appropriate changes in federal health insurance programs to make the basis for physician visits to nursing homes real medical need rather than regulatory requirements.

—That the AMA continue its efforts for adoption of the AMA's Current Procedural Terminology in government health programs.

—That the Board speed up efforts to rectify abuses in the promulgation of regulations in the *Federal Register.*

Professional Liability

In endorsing a series of proposals aimed at mitigating malpractice problems, the House stressed that the continued ability of physicians to provide care to patients was a prime motivating factor.

While adopting a substitute resolution supporting the use of "all available legal means" by local physicians in seeking reforms in professional liability insurance, for example, it was emphasized that work slowdowns were basically a commitment to continued patient care rather than personal financial gain in the traditional sense of a strike.

The final version of the resolution reads: "The AMA

recognizes that physicians are entitled to use all available legal means, without jeopardizing the medical care of their patients, to protest when intolerable and unwarranted burdens are placed upon their patients, the Association, or its members." The resolution also recognizes that "the primary commitment of the AMA and its physician members is to the essential medical needs of the people of this nation."

In other actions aimed at easing the malpractice crisis, the House urged early establishment of an AMA-sponsored professional liability reinsurance program, so as to provide a second level of protection for state society-sponsored primary insurance plans.

As a condition of participation, states with captive carriers would have to effect changes in the state tort system to insure long-range improvements in the underwriting climate.

In other malpractice actions, the House urged renewed AMA assistance to state societies in seeking legislative enactment, and public endorsement of, mechanisms such as voluntary arbitration plans, and changes in tort law to relieve statutory elements which contribute to malpractice problems.

The House also reaffirmed its stand against claims-made types of insurance coverage, and voted to encourage the federal government to provide coverage for physicians employed by government.

National Health Insurance

Delegates supported the national health insurance bill of the AMA which has been introduced in Congress. The bill would provide both basic and comprehensive benefits for all Americans, but would minimize federal administration and financing.

During a health insurance debate in the House, considerable sentiment was expressed for a national catastrophic insurance coverage program, but the subject was referred to the Board for further study.

In other actions related to Physicians and the Public, the House:

—Urged measures to assure physicians and patients of high-quality drug therapy by seeking possible modifications in FDA regulations to facilitate improvements in the development and distribution of drugs.

—Called for expanded use of flame-resistant fabrics in clothing, bedding, draperies, and decorative materials to reduce burn hazards.

—Reaffirmed existing policy in lieu of a resolution that would have defined death as "irreversible cessation of total brain function," which present policy defines as one acceptable criteria.

—Endorsed legislation to permit Social Security recipients to earn unlimited income without a reduction in retirement benefits.

Medical Staff Prerogatives in Patient Care

Several actions aimed at preserving hospital medical staff prerogatives in patient care were endorsed by the House.

A joint report of the Councils on Medical Education and Medical Service provided a detailed study of possible medical staff problems posed by the increasing appointment of salaried chiefs of staff and department heads by hospital governing bodies. The report pointed out that medical staff rights and prerogatives could be thus shifted to governing boards, and made several recommendations for local medical staffs and medical societies to counter the trend. Delegates adopted the report.

The House also endorsed a Board report urging AMA members on the Joint Commission on Accreditation of Hospitals to seek to amend JCAH standards to provide due process for physicians employed in medico-administrative positions.

In related actions, Delegates supported measures to prevent local or regional duplication of JCAH functions, and urged that JCAH be requested "to limit requirements for medical audit or other quality assurance activities by medical staffs" to those whose necessity can be "documented" by the AMA Board of Trustees.

Foreign Medical Graduates

The House endorsed a continuation of the fifth pathway concept of the AMA for determining the qualifications of FMGs, rejecting a proposal to eliminate the program.

On other matters related to FMGs, the House requested additional information for consideration and possible action at the 1975 Clinical Meeting.

Medical Schools

The House voted to continue opposition to medical manpower legislation now before Congress which would require medical students to repay capitation grants to their schools or else provide in-kind service in areas stipulated by government, and which would provide federal control of the number and distribution of residencies.

At the same time, delegates endorsed efforts to increase the $10,000 maximum limit on federally-insured loans to medical students, and to encourage a continuation of federal support for medical and health manpower programs.

In other actions related to Physicians and Hospitals and Medical Schools, the House:

—Adopted two reports addressing provisions for safeguarding medical student records.

—Endorsed AMA support for the drafting of essen-

tials for residency programs in emergency medicine.

—Reaffirmed the AMA position that physician assistants in hospitals should be supervised by physicians, and urged that the policy be widely disseminated.

Miscellaneous House Actions

—Approval of Annual Convention in St. Louis, 1978; in New York, 1979; in Las Vegas, 1980; in San Francisco, 1981; and in Dallas, 1982.

—Referral for further study and subsequent report model state legislation for the confidentiality of medical records.

—Encouragement of the development of medical-legal symposia involving medical and law students by AMA and ABA representatives.

—Filing of a Board report which assures the House that AMA's anti-quackery activities will be maintained.

—A recommendation that medical schools recognize contributions of women in medicine and promote equal opportunities for them in education and in practice.

—Adoption of a Board report defining planned patient education programs and suggesting they be reimbursable under health insurance.

—A recommendation that all medical students be given opportunities for primary care experiences in inner city or rural areas.

—Support for continued AMA involvement in the evaluation of services to be provided by emerging health occupations, and in judging the appropriateness of each occupation.

Kansas Resolution No. 60, combined with Texas Resolution No. 130, was approved by the following substitute resolution:

Resolved, That the American Medical Association request the Secretary of Health, Education, and Welfare to amend regulations entitled "Special Requirements Applicable to Sterilization Procedures" governing state plans under Titles IV-A, VI and XIX of the Social Security Act, to permit more expeditious, economical, and flexible management of voluntary sterilization procedures.

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Dec. 11—Cardiovascular
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Mar. 17—Cancer
May 12—Therapy

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Dec. 12—Cardiovascular
Mar. 19—Cancer
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CONCORDIA—St. Joseph's Hospital
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Nov. 4—Therapy
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Mar. 16—Office Pediatrics
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Nov. 6—Therapy
Dec. 11—Grand Rounds
Mar. 18—Office Pediatrics
May 13—Cardiovascular

COLBY—Ramada Inn, I-70 at Colby Exit
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Nov. 5—Therapy
Dec. 10—Grand Rounds
Mar. 17—Office Pediatrics
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For program announcement and information, write: DEPARTMENT OF POSTGRADUATE MEDICAL EDUCATION, University of Kansas Medical Center, Kansas City, Kansas 66103.

NEW MEMBERS

The JOURNAL takes this opportunity to welcome these new members into the Kansas Medical Society.

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Difficult Hernias

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AN APPEAL FOR PHYSICIANS

The Indian Health Service, which is a part of the US Public Health Service, is responsible for the health care of approximately 500,000 American Indians and Alaskan Natives. In order to furnish this care we operate 51 hospitals, 77 health centers, and 300 health stations in 22 states.

The Aberdeen Area is responsible for the health care of American Indians in the states of North and South Dakota, Nebraska, Minnesota, Wisconsin, Iowa, and Michigan. However, our medical facilities are located in North and South Dakota, Minnesota, and Nebraska. It is possible that we could have vacancies at any of our locations, but specific vacancies may be learned of by contacting the office below.

There are two ways in which a physician may enter the Indian Health Service. One is through the US Public Health Service Commissioned Corps system. The Commissioned Corps officer will receive pay and fringe benefits (housing allowance, subsistence, incentive pay, etc.) commensurate with his educational and professional experience. Under the new bonus plan authorized for military and Public Health physicians, the pay and fringe benefits amount to over $30,000 per year. Commissioned Officers receive 30 days annual leave per year, free health insurance for the officer, and an extremely low-cost health plan for dependents. A Commissioned Officer is eligible for retirement after 20 years of active duty.

The second way a physician may enter the Indian Health Service is through the Civil Service appointment procedures. Current entrance salaries range from $20,125 to $29,846 per year depending upon education and professional experience. This salary is based upon a 40-hour workweek, and if overtime work is required, the physician is paid overtime. Civil Service employees are entitled to 13 days annual leave per year for the first three years of service (increases with tenure); and 13 days sick leave per year (accumulative). Retirement is based on the number of years of service and the age of the employee. At the present time, both Commissioned Corps and Civil Service physicians in the Aberdeen Area are eligible for continuing educational benefits up to $500 per year. *PHYSICIANS IN BOTH CATEGORIES ARE NOT REQUIRED TO PURCHASE MALPRACTICE INSURANCE.*

The agency is permitted to pay travel for the employee and his immediate family and pay for the shipment of household goods and personal effects to the maximum amount permitted by law.

For additional information contact: Edward White, Physician Recruitment, Aberdeen Area Indian Health Service, Federal Building, Aberdeen, South Dakota 57401, Phone 605-225-0250, Ext. 451 (Call collect).

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According to the By-Laws, the members of the Board of Directors and Alternate Directors shall be appointed by the Executive Committee of the Kansas Medical Society subject to approval of the Council of the Kansas Medical Society, for a term of one (1) year.

If you are interested in such a position, please write to: The Kansas Medical Society, 1300 Topeka Blvd., Topeka 66612.

OCTOBER: IMMUNIZATION ACTION MONTH

As part of a continuing effort to reduce the incidence of childhood diseases and eliminate the threat of widespread epidemics, the US Center for Disease Control has designated October 1975, as "Immunization Action Month." The goal of the program is to increase the number of children immunized against polio, measles, mumps, rubella, diphtheria, tetanus, and pertussis.

IAM 1975 is a continuation of efforts last year and the year before to increase the immunization levels of preschoolers. Survey results indicate that thanks to IAM 1973 and 1974, the ten-year downward trend in immunization levels among children ages one to four has been reversed. In 1973 alone, half a million more children were immunized against preventable disease than were immunized the previous year.

Unfortunately, despite these effective efforts in 1973 and 1974 over five million preschoolers are still unprotected. That is why several major medical organizations have joined CDC in its program to increase the immunity levels among inadequately or unimmunized preschool children. These include the American Academy of Pediatrics, the American Medical Association, the American Academy of Family Physicians, the National Medical Association, the American Osteopathic Association, the American Nurses' Association, and the National League for Nursing. The American Academy of Pediatrics is coordinating the activities of the major medical organizations in the 1975 IAM program and the professional press relations program.

Explaining the reason for the program, Dr. John J. Witte, Director of the Immunization Division, US Center for Disease Control, said that the percentage of young children immunized against these diseases has been declining at an alarming rate in recent years. As a result, diseases that were once well controlled, such as polio, measles and rubella, are becoming a problem once again. One of the main problems, according to Dr. Witte, is that many parents wait until their children approach school age before having them immunized. This leaves the child unprotected during the first four or five years of his life, an age when some of the diseases are most serious and most likely to strike. Moreover, this means that if an epidemic occurs, it is most likely to spread quickly among children of this age group.

The US Center for Disease Control will work closely with organized medicine to urge physicians to audit their patients' immunization records in an effort to upgrade immunization levels for children one to four years old. The long-term objective of the IAM program di-

(Continued on page 15A)

Information for Authors

Manuscript Preparation

Manuscripts must be typewritten, double spaced, leaving wide margins. Submit the original, plus one copy if possible.

Titles should be short, specific, and amenable to indexing. A subtitle is frequently used to keep the main title short.

Summary: All manuscripts should include a short abstract which is a factual (not descriptive) summary of the work.

Author Responsibility: The author is responsible for all statements made in his work, including changes made by the copy editor. Manuscripts are received with the explicit understanding that they are not simultaneously under consideration by any other publication. Publication elsewhere will be subsequently authorized at the discretion of the Editor.

Galley Proof: To make extensive changes in the article after the text has been set in type may require an additional cost which exceeds the original. The galley proof is for correction of ERRORS, and a rewriting of the article should be done on the original copy BEFORE it is submitted for publication.

Drugs should be called by their generic names; the trade names can be added in parentheses if they are considered important. All *units of measure* must be given in the metric system.

References

Bibliographic references should not exceed 20 in number, documenting key publications. Personal communications and unpublished data should not be included. References should be arranged according to the order of citation, and not alphabetically. All references must be numbered consecutively and all must be cited in the text. Use the style of the AMA publications, giving; name of author, title of article, name of periodical, volume, pages, year.

Illustrations

All material which cannot be set in type, such as photographs, line drawings, graphs, charts, tracings (for preparation of tables, see below) must be mounted on white cardboard. All must be identified on the back as to figure number, author's name, and an arrow indicating top. Legends should be typed double spaced on a separate sheet of paper, limited to a maximum of 30 words.

Drawings and graphs should be done professionally in India ink on illustration board or high grade white drawing paper.

Photographic material should be submitted in duplicate as high-contrast, glossy prints. Color illustrations will be accepted for publication only if the author assumes the cost.

THE JOURNAL will assume the cost of B/W engravings and cuts up to $35 (or 5 cuts). Engraving cost for illustrations in excess of $35 will be billed to the author.

Tables

Because tables are set by hand, their cost is comparable to illustrations. A reasonable number of tables are allowed without cost to the author.

Tables should be self-explanatory and should supplement, not duplicate, the text. Since the purpose of a table is to compare or classify related items, the data must be logically and clearly organized. The relationship and comparison are established by the correct choice of column heads (captions of vertical columns)and stubs (left entries in horizontal listings).

Each table should be typed double spaced, including all headings, on separate sheets of lettersize paper. Oversize paper should not be used. Instead, repeat heads and stubs on a second sheet for tables requiring extra width. Number tables consecutively. Each table must have a title.

Reprints

A reprint order form with a table covering cost will be sent with the galley proof to each contributor. Since the JOURNAL has no way to provide for reprints, they must be ordered by the author and purchased directly from the printer.

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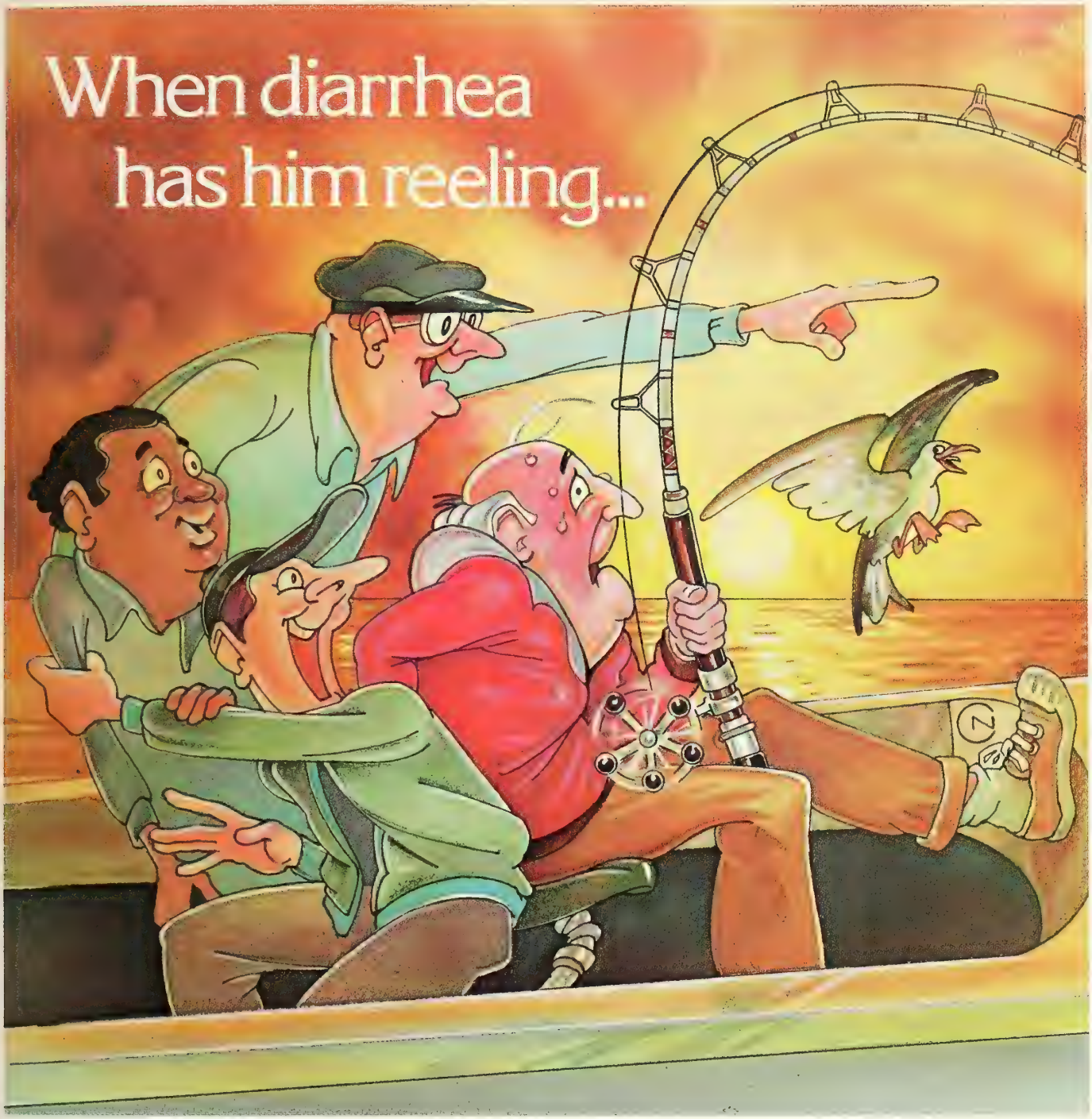
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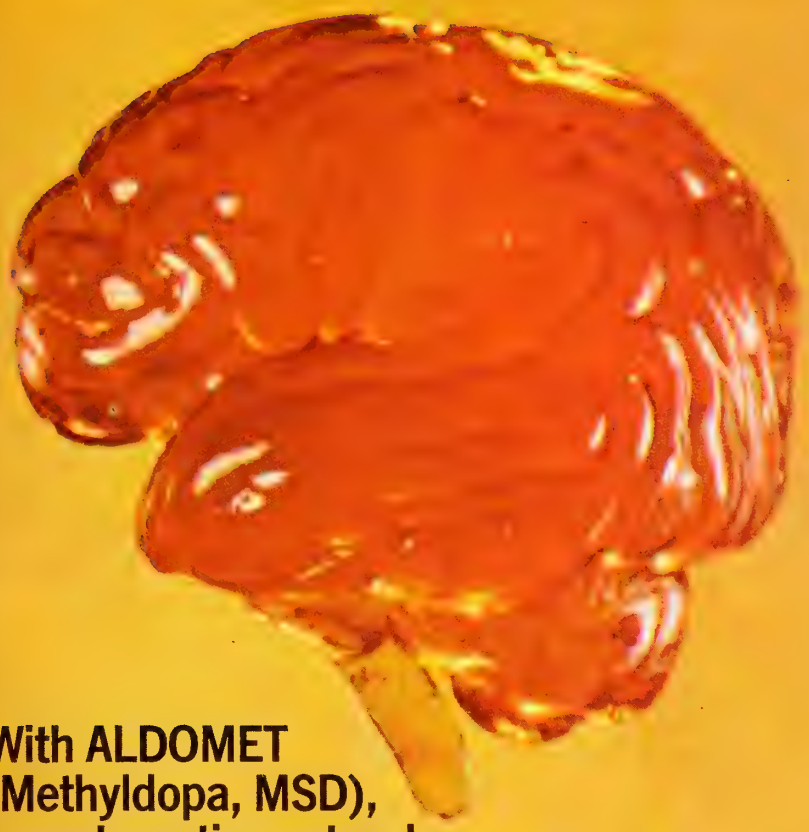


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With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reaction or unusual manifestations of drug idiosyncrasy

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by this procedure

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia

Allergic: Drug-related fever, skin rash

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, mild arthralgia, myalgia

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

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KMS Obituaries

HERBERT S. BENNIE, M.D.

Dr. Herbert S. Bennie, of Almena, died June 25, 1975, at the age of 79. He was born in Long Island, Kansas, on July 17, 1895.

Dr. Bennie was graduated from the University of Kansas School of Medicine in 1921. He joined the medical practice of his father, in Almena, in 1922.

A memorial fund has been established with the Norton County Hospital.

RENE P. LEFEBVRE, M.D.

Dr. Rene Paul Lefebvre, 55, of Topeka, died June 2, 1975. He was born May 7, 1920, in Solre, France.

Dr. Lefebvre was graduated from the School of Medicine of Paris in 1948. He served as a deputy district coroner in Shawnee County for a number of years.

Surviving Dr. Lefebvre is his wife. A memorial fund has been established with the Stormont-Vail Hospital, Topeka.

EDWARD J. SCHULTE, M.D.

Dr. Edward J. Schulte, of Shawnee Mission, died April 7, 1975, at the age of 74. He was born December 28, 1900, in Dodge, Nebraska.

Dr. Schulte was graduated from the St. Louis University Medical School in 1931, having previously graduated from the Creighton University School of Pharmacy. He practiced medicine in Kansas since 1932.

Survivors include his wife and a daughter.

GERALD C. UNREIN, M.D.

Dr. Gerald C. Unrein, of Hays, died February 17, 1975, at the age of 82. He was born March 29, 1893, in Hays.

A graduate of the St. Louis University School of Medicine in 1918, Dr. Unrein practiced medicine in Kansas until his retirement in 1967.

Surviving Dr. Unrein are his wife, a daughter, and seven sons.

Selection of Patients

(Continued from page 238)

9. Bertolasi, C. A.; Trone, J. E.; *et al.:* Unstable angina—Prospective and randomized study of its evolution, with and without surgery. *Am. J. Cardiol.* 33:20, 1974.

10. Fulton, M.; Lutz, W.; *et al.:* Natural history of unstable angina. *Lancet* 1:860, 1972.

11. Spencer, F. C.: Bypass grafting for preinfarction angina. *Circulation* 45:1314, 1972.

12. Lim, J. S.; Proudfit, W. L. and Sones, F. M., Jr.: Selective coronary arteriography in young men, a follow-up of 449 patients. *Circulation* 49:1122, 1974.

13. Keon, W. J.; Bedard, P.; *et al.:* Experience with emergency aortocoronary bypass grafts in the presence of acute myocardial infarction. *Circulation* 47:151, 1973.

14. Rene, G. J., Jr.; Morris, G. C.; *et al.:* Emergency coronary artery bypass grafts in the treatment of myocardial infarction. *Circulation* 47:177, 1973.

October: Immunization Month

(Continued from page 257)

rected toward organized medicine is the establishment and maintenance of a system capable of motivating both public and private medical officials to sustain a high degree of interest in preschool immunization activities.

(Further information concerning Immunization Action Month may be obtained from the American Academy of Pediatrics, coordinating medical organization for the 1975 program. Contact either Mr. John P. Lynch or Ms Lucy Ranes Maloney, 1801 Hinman Ave., Evanston, IL 60204. Phone: 312-869-4255.)

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NOTICE

On Saturday, October 18, 1975, the second annual Physician-Community Awareness Day Conference will be held in Wichita. This year's conference has been expanded significantly and is supported by the Kansas Medical Society, the WSU Branch of the University of Kansas School of Medicine, Wesley Medical Center, St. Francis Hospital, St. Joseph's Hospital, and the Medical Society of Sedgwick County.

The theme of the conference, to be carried out through various workshop sessions, will be the problems relating to recruiting primary care physicians for rural communities. It is anticipated that over 200 individuals will attend. For further information, contact:

Director for Special Projects
WSU Branch—KUSM
2221 N. Hillside
Wichita, Kansas 67219

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MEDICAL DIRECTOR for the Kansas Medical Assistance Program, SRS, needed to administer the Kansas Medicaid Program. Please contact P. L. Beiderwell, M.D., Coordinator of Medical Services, SRS, 6th Floor, State Office Building, Topeka 66612; or contact Mr. W. A. Newman, Administrator of Medical Services Section, same address.

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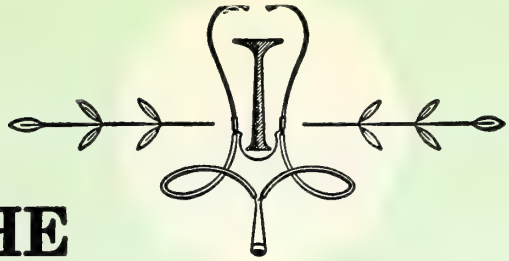
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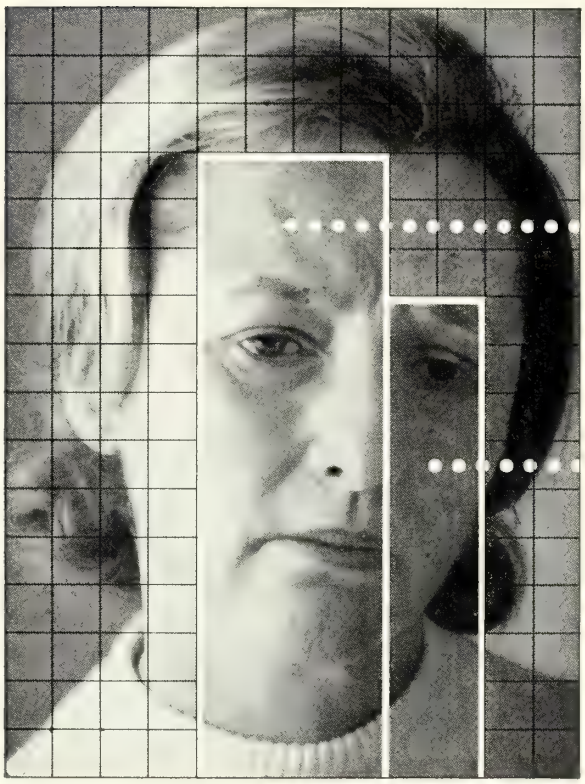
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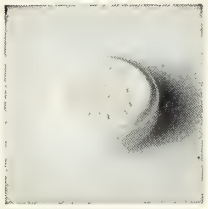
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Volume LXXVI, Number 11—November, 1975

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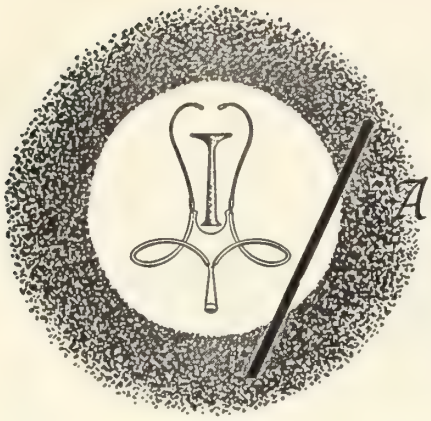
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Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the* Doctor's Calendar. *Notice of the session is posted in advance to allow the physician time to make preparations.

NOVEMBER

Nov. 17-21 American Heart Association (E), Disneyland, Anaheim, Calif. INFO: William W. Moore, American Heart Association, 44 E. 23rd Street, New York, NY 10010.

Nov. 28-Dec. 6 AMA Clinical Meeting, Hawaii.

DECEMBER

Dec. 1-5 *Fetal Heart Rate Monitoring,* San Juan, Puerto Rico. INFO: The Deparment of Continuing Education, Suite 2700, One East Wacker Drive, Chicago 60601.

Dec. 3-4 *Group Dynamics for RNs,* Milwaukee. INFO: Department of Nursing, U. of Wisconsin-Extension, 929 North 6th, Milwaukee 53203.

Dec. 4-5 Annual clinical meeting, Kansas City Society of Ophthalmology and Otolaryngology, Plaza Inn, Kansas City, Missouri. INFO: Roger A. Weis, 3036 Gillham Rd., Kansas City, Missouri 64108.

Dec. 5-10 International College of Surgeons (E), Sheraton Waikiki, Honolulu. INFO: W. A. Houser, 1516 N. Lake Shore Dr., Chicago, IL 60610.

Dec. 6 *Induction of Labor,* Albuquerque.

Emergency Delivery, San Antonio. INFO: Department of Continuing Education, Suite 2700, One East Wacker Drive, Chicago 60601.

Dec. 6-11 American Academy of Dermatology (E, M), Hilton and St. Francis, San Francisco. INFO: John M. Shaw, M.D., 1116 S. Fifth, Tacoma, WA 98405.

Dec. 16 Chemistry Proficiency Review, St. Louis. INFO: Medical Center Continuing Education, Saint Louis University, 1402 S. Grand Blvd., St. Louis 63104.

JANUARY

Jan. 28-30 American Society for Surgery of the Hand, Fairmont Hotel, New Orleans. INFO: Ms G. M. Gorman, 3 Parker Place, Suite 233, 2600 S. Parker Road, Aurora, CO 80232.

MARCH

Mar. 4-6 Central Surgical Association, Holiday Inn, Rochester. INFO: A. J. Walt, M.D., 540 E. Canfield, Detroit 48201.

Mar. 27-31 American Society of Abdominal Surgeons, Pick Congress Hotel, Chicago. INFO: B. F. Alfano, M.D., 675 Main, Melrose, MA 02176.

APRIL

Apr. 4-9 American College of Allergists, Las Vegas Hilton, Las Vegas. INFO: E. Bauers, 2100 Dain Tower, Minneapolis 55402.

Apr. 5-8 American College of Physicians, Civic Center, Philadelphia. INFO: Convention Dept., American College of Physicians, 4200 Pine, Philadelphia 19104.

Apr. 8-9 AMA National Conference on Rural Health, Hyatt Regency, Phoenix. INFO: AMA Dept. of Rural and Community Health, 535 N. Dearborn, Chicago 60610.

Apr. 26-29 American College of Surgeons, Boston. INFO: C. R. Hanlon, M.D., 55 E. Erie, Chicago 60611.

University of Miami School of Medicine

Nov. 14-15 *Intra-Aortic Balloon Pump,* Bal Harbour

Nov. 20-23 *Human Sexuality,* Bal Harbour

Jan. 5-8 *Pediatric Nephrology III,* Bal Harbour

Jan. 20-23 *Pathology,* Miami Beach

Jan. 23-25 *Anatomic Pathology,* Miami Beach

Feb. 23-27 *Basic Neurology,* Miami Beach

Mar. 31-Apr. 3 *Renal Disease and Hypertension,* Bal Harbour

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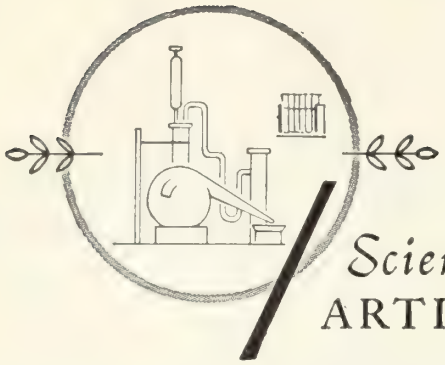
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American College of Physicians Issue

The November issue of the JOURNAL is customarily devoted to papers presented at the yearly Kansas Regional Meeting of The American College of Physicians.

The 47th anniversary meeting of the College was held February 21, 1975, in Topeka, Kansas. The Program Chairman was Howard N. Ward, M.D., Topeka, and the Chairman of Arrangements was Edwin Z. Levy, M.D., Topeka.

Doctor Ward has made the collection and publication of these papers possible, for which the Editorial Board is grateful. The JOURNAL appreciates this yearly opportunity to expand the audience for these interesting and instructive papers which originated in Kansas.



Scientific
ARTICLES

Reversible Cardiogenic Shock

After Low Dose Oral Propranolol

HOWARD SWANSON, M.D., G. D. BEAUCHAMP, M.D., HUBERT BELL, M.D. *and* LYNN KINDRED, M.D., *Kansas City, Missouri*

BETA-ADRENERGIC blockade with propranolol is becoming an increasingly common medical therapy. Accepted indications include cardiac arrhythmias, angina pectoris, hypertension, pheochromocytoma, idiopathic hypertrophic subaortic stenosis, and thyrotoxicosis.[1] This list could be extended to more than 30 suggested indications in the literature.[2] With increasing use, increasing numbers of adverse reactions have been found.

In 1966, Stephen[3] reported pharmacologic adverse effects including hypotension, bradycardia, cardiac failure, heart block, and bronchospasm. He also described non-pharmacologic side effects such as rashes, visual disturbances, purpura, and mental confusion. Hypoglycemia, especially in diabetics, has also been reported.[4] Others have described similar adverse effects.[1, 2, 4–7] Stephen included three patients who developed bradycardia, asystole, and death after intravenous propranolol. Little mention of a shock syndrome with oral propranolol occurred until Greenblatt, *et al.*[8] published their report in 1973. They surveyed 268 hospitalized patients receiving propranolol, and found adverse reactions in 25. Eight of these 25 patients had life-threatening reactions, including three with bradycardia and shock. Seven of these eight were receiving less than 30 mg of propranolol daily, and four of the severe reactions occurred within hours after the administration of the drug. Seven of the eight had ischemic heart disease. Greenblatt found adverse reactions were more common with increased age, azotemia, and prolonged hospitalization.

Recently at St. Luke's Hospital, we have had experience with three patients who developed a picture of cardiogenic shock within hours to days of initial low dose oral propranolol therapy. All three were over 60 years of age, all were taking digitalis, and all received propranolol for ventricular arrhythmias. In addition, one patient had evidence of renal insufficiency with a creatinine of 2.5 mg/100 ml. None of the patients demonstrated evidence of recent myocardial infarction by EKG or serum enzymes.

Three cases are presented, in whom cardiogenic shock with severe hypotension, mental confusion, oliguria, and inappropriate bradycardia developed after the initial oral propranolol therapy.

Case One

A 63-year-old white male suffered a myocardial infarction in April 1973, resulting in an apical scar and aneurysm. In May, syncopal episodes developed with third degree heartblock, which was treated with a fixed rate pacemaker. In September, he experienced recurrent

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Presented at the annual meeting of the Kansas Chapter, American College of Physicians, Topeka, February 21, 1975.

syncopal attacks and an EKG revealed pacemaker spikes falling on T waves. Because of concern that this was initiating ventricular tachycardia, he was started on a regimen of procainamide, 500 mg every 6 hours by mouth, and propranolol, 10 mg every 6 hours by mouth. Forty-eight hours later, the patient became acutely ill with mental confusion, cold extremities, jugular venous distention, oliguria, hepatomegaly, blood pressure 80 systolic, and a pacing pulse rate of 80 beats per minute. Initial attempts at diuresis failed and the blood pressure became unobtainable. Cardiopulmonary resuscitation was started. The patient was given 5 mg glucagon intravenously, and infusions of isoproterenol and norepinephrine were started at 1.8 and 3 mcg/minute respectively. Several hours later, the systolic blood pressure was increased to 90-100 mm Hg, and urine output was greater than 200 cc/hour. With stabilization, the norepinephrine was discontinued in 36 hours, and the isoproterenol in 62 hours. A demand pacemaker was inserted and the patient was discharged with no further syncopal attacks.

Case Two

A 71-year-old white male suffered a myocardial infarction in November 1973, followed by recurrent ventricular fibrillation controlled by oral procainamide, 500 mg four times a day. In May 1974, he developed premature ventricular contractions and recurrent ventricular tachycardia. He was hospitalized and placed on a regimen of propranolol by mouth, 10 mg every 6 hours, in an attempt to control his ventricular irritability. Twelve hours after his second dose, he became diaphoretic with cold extremities, mental confusion, oliguria, systolic blood pressure palpable at 66 mm Hg, and a pulse of 68. Because of jugular venous distention and severe bilateral rales in the lungs, he was treated with furosemide for pulmonary edema. He was administered isoproterenol with a 4 mcg/minute infusion. The systolic blood pressure remained below 80, and the pulse below 75 beats per minute, until five hours later, when the isoproterenol infusion had reached 14 mcg/minute. At this point, blood pressure became audible at 90 mm Hg, the pulse increased to 100 beats per minute, and the urine output increased to greater than 100 cc/hour. After this initial stabilization, the isoproterenol dosage was slowly decreased. However, one week later the patient developed a nodal rhythm with frequent premature ventricular contractions and poor cardiac output. Despite lidocaine, quinidine, procainamide, electrical cardioversion and isoproterenol, he died with asystole.

Case Three

A 73-year-old white male was transferred to St. Luke's Hospital because of recurrent ventricular tachycardia. He had no evidence of a previous myocardial infarction on EKG and was taking no medications on admission. His initial laboratory record revealed a serum creatinine of 2.5 mg/100 ml. He was started on a regimen of oral digoxin 0.25 mg daily; procainamide, 250 mg by mouth every 6 hours; and propranolol by mouth, 10 mg every 6 hours. His arrhythmia was controlled, but six days later he developed chest tightness and a decrease of blood pressure to 90/60. A repeat EKG revealed no change and he improved with rest and oxygen. Five hours later, the patient developed extreme shortness of breath, peripheral cyanosis, a nodal bradycardia, and an unobtainable blood pressure. His shock syndrome failed to respond to usual cardiopulmonary resuscitation, including epinephrine and isoproterenol infusion. The autopsy revealed the cause of death to be cardiac tamponade secondary to laceration of the right ventricle by a broken rib. Only moderate coronary disease was found with no evidence of recent occlusion or myocardial infarction.

Greenblatt's study,[8] together with our observation of three cases of shock following initial propranolol therapy, suggests that this may be a syndrome occurring more commonly than has been previously reported in the literature. Steps for its prevention should be taken during the induction of B-blockade. Physicians must be aware of this possible adverse effect. Patients with severe heart disease, advanced age, or uremia should have close monitoring of their vital signs and urine output in the first hours and days of treatment. If any deterioration occurs, propranolol and other myocardial depressant drugs such as reserpine or guanethidine should be discontinued, and aggressive therapy to increase cardiac output should then be initiated.

The usual tachycardia and increase in blood pressure and cardiac output produced by a 2 mcg/minute isoproterenol infusion is blocked by a 10 mg dose of propranolol administered intravenously.[4] However, these responses to isoproterenol may be restored by increasing its infusion to 12.5 mcg/minute. This principle of reversible inhibition of B-receptors can be used to treat a patient with shock secondary to B-blockade. An infusion should be begun with usual doses of isoproterenol (2-8 mcg/minute), and then the infusion rate should be increased until response is noted by increase in heart rate, blood pressure, and urine output. Maximum doses of 1.8 and 14 mcg/minute were used in our patients.

Myocardial stimulants acting at sites other than B-adrenergic may also be helpful. Glucagon has been reported as having such an inotrophic effect.[9] It is believed to act through the cyclic adenosine monophosphate (AMP) system or by increasing calcium transport into the cell. Lvoff[9] reported two patients with bradycardia and heart failure, who responded to a 5 mg glucagon

bolus with increased heart rate and marked clinical improvement. After clinical improvement from a glucagon bolus, he recommends continued therapy with a 5 mg/hour glucagon infusion. Phenothiazine anti-emetic agents may be necessary with glucagon, and diabetics should be closely monitored for hyperglycemia. Patients with shock secondary to B-blockade might also be expected to benefit from digitalization.

Summary

Utilization of B-adrenergic blockade has increased. This article describes three patients in whom cardiogenic shock with severe hypotension, mental confusion, oliguria, and inappropriate bradycardia developed after initial oral propranolol therapy. In all cases the dosage was low. Ischemic heart disease, uremia, and increasing age appear to predispose to such severe adverse reactions to propranolol. This potentially reversible "propranolol shock syndrome" demands awareness and early recognition by physicians. Patients beginning propranolol therapy should be closely monitored and, with any evidence of this syndrome, aggressive therapy should be initiated as outlined.

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Flat GTT

The Significance of Flat Glucose Tolerance Test

SHARFUDDIN SHAH, M.D., ROBERT P. STOFFER, M.D. ***and***
CHARLES R. McREYNOLDS, M.D., ***Halstead***

FLAT GTT usually suggests the malabsorption syndrome. At our clinic, we have observed flat GTTs associated with psychosomatic and emotionally disturbed individuals more often than in malabsorption, however.

Methodology consisted of measurement of glucose by autoanalyzer, potassium ferrocyanide reduction method, and immunoreactive insulin assay (IRI) by a competitive binding method, as reported earlier by McReynolds,[1] *et al.* The results were reported by plotting these values on a single chart; plotting glucose level linearly, and insulin levels as percent increase in the basal level. Patients had glucose tolerance tests done if they had symptoms of diabetes, hypoglycemia, glycosuria, high fasting blood sugar, high two-hour postprandial blood sugar, or a raised two-hour glucola test. The patients were on regular diets and were fasted overnight. Fasting blood sugars were obtained. The subjects were then given 100 gm of glucose in flavored drinks, and blood sugars were collected at 1 hour, 1½ hours, 2 hours, 3 hours, 4 hours, and 5 hours. Fajan and Cohn[2] criteria were used for interpretation of the glucose tolerance tests.

Out of 2,500 patients who had combined glucose tolerance tests and immunoreactive insulin (IRI) assay, 252 had a flat GTT. The glucose tolerance curve was considered flat if the difference between fasting and peak blood sugar level was less than 40 mgm%, as recommended by Theysen.[3]

Observation

We noted that with a flat GTT the insulin output varied, and age and sex incidence were of some significance *(Tables I and II).*

On administration of 100 gm of oral glucose in a standard glucose tolerance test, the plasma insulin rises to a peak in one-half to one hour, and then it returns to the normal level, in two hours in normal subjects. The maximum insulin secretion differs in different individuals in response to glucola, but generally, four to seven times the basic fasting level is noted.

We noted three types of insulin curves with flat GTT curve, as presented in *Chart 1,* being normal, while *Charts 2, 3* and *4* show a flat GTT with high insulin output, low insulin output, and normal insulin output. Most patients were between 36 and 54 years of age. Two thirds were female, one third male.

Diseases associated with flat GTT, other than malabsorption, are shown in *Table III.*

Most of the patients had multiple psychosomatic complaints, *i.e.,* tension headaches and irritable colon syndrome, as well as anxiety reaction or depression *(Table III).* None of these patients had any evidence of malabsorption. Out of 252 patients, only two had malabsorption and two had hypothyroidism. Some of these patients had other medical problems.

Previous medication for many patients consisted of Librium, Benadryl and Bentyl, but there were many without any medication. It would seem reasonable to conclude that medication was not a factor in producing a flat GTT in this series of patients.

TABLE I
INSULIN OUTPUT

Sex	*No. of Patients With High Insulin Output*	*No. of Patients With Low Insulin Output*	*No. of Patients With Normal Insulin Output*
Male	11	25	29
Female	47	40	100
	58	65	129

TABLE II
AGE AND SEX INCIDENCE

Age	*Male*	*Female*
1-18	2	2*
19-35	6	32
36-54	30	93
55-70	14	51
Over 70	13	9
	65	187

* Most patients seen in this clinic are adults and the 1-18 year age group series does not represent a valid age distribution sample.

From the Hertzler Clinic, Halstead 67056.

Presented at the annual meeting of the Kansas Chapter, American College of Physicians, Topeka, February 21, 1975.

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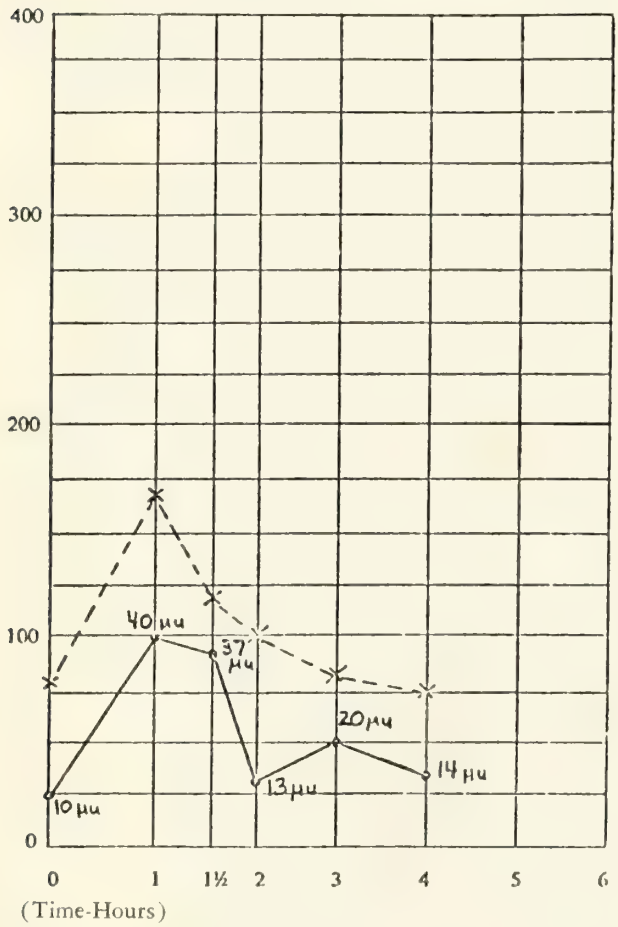
TABLE III

DISEASES ASSOCIATED WITH FLAT GTT, OTHER THAN MALABSORPTION

	%
Irritable colon (spastic colon)	34
Tension headache	25
Vaginitis	13
Hiatus hernia	17
Obesity	10
Anxiety reaction	10
Depressive reaction	8

Hypoglycemic readings revealed that 4 per cent of the patients with flat GTT presented with symptoms of weakness and sweating in the morning. Inspection of their GTT did not reveal hypoglycemia of significant degree to account for these symptoms—instead, the GTT was just flat.

CHART NO. 1

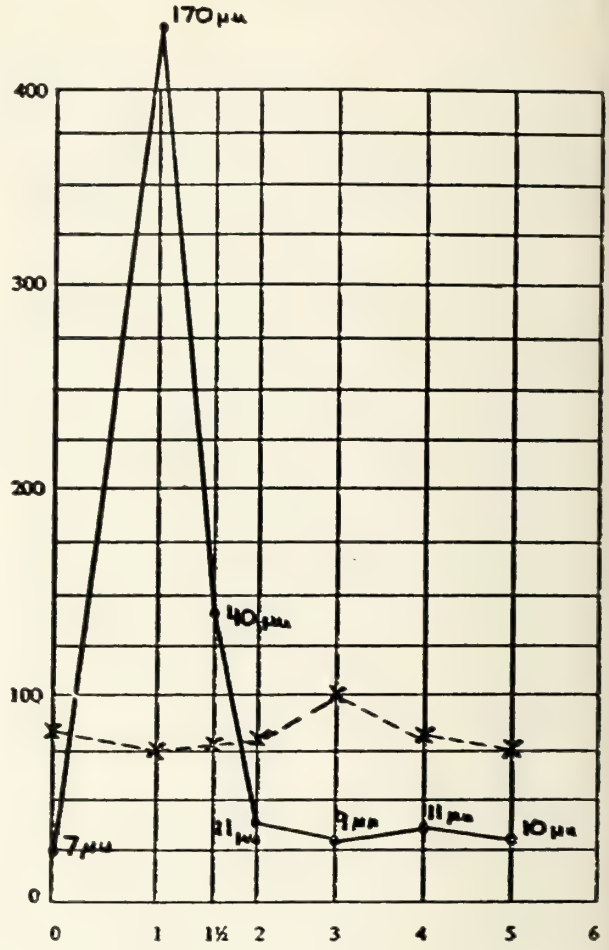


Normal Glucose Tolerance Test

Normal Immuno Reactive Insulin Assay

Blood sugar (plasma) in mg %. Immuno reactive insulin assay in μ units/ml (μu) expressed on graph as % increase in basal level. - - - - Glucose tolerance curve. ——— Immuno reactive insulin assay curve. Shah, S., M.D., Stoffer, R. P., M.D., McReynolds, C. R., M.D.

CHART NO. 2



Flat Glucose Tolerance Test

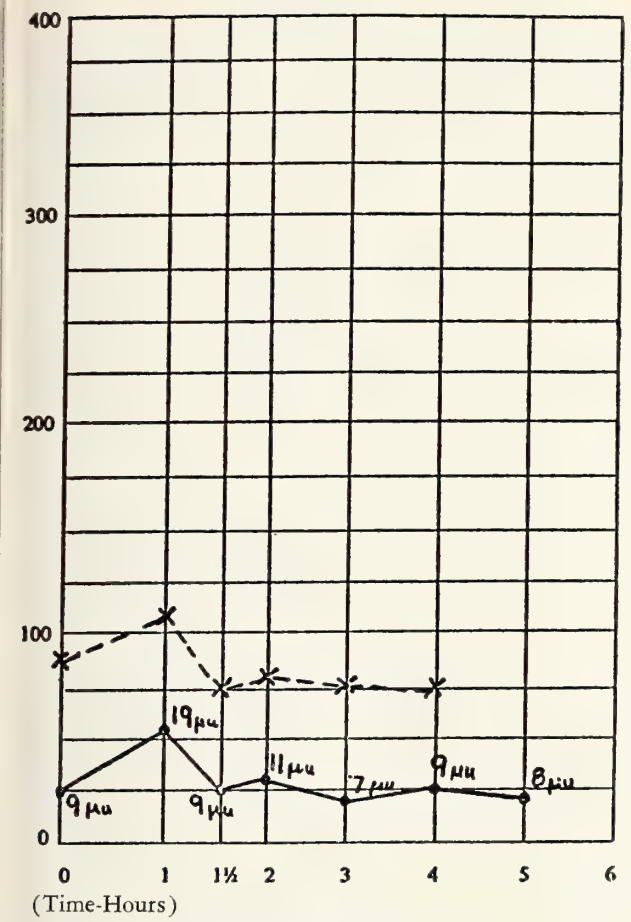
High Immuno Reactive Insulin Assay

Blood sugar (plasma)in mg %. Immuno reactive insulin assay in μ units/ml (μu) expressed on graph as % increase in basal level. - - - - Glucose tolerance curve. ——— Immuno reactive insulin assay curve. Shah, S., M.D., Stoffer, R. P., M.D., McReynolds, C. R., M.D.

Discussion

In our previous papers (Shah,[4] *et al.* and McReynolds,[1] *et al.*) we presented a series of 1,300 patients' GTT and IRI, when the same sex and age distribution of flat GTT were noted in 96 patients of McReynolds, *et al.* as we noted in this larger series of 252. A most interesting relation of flat GTT with different insulin curves is noted. Hinkle,[5] *et al.* noted that under stress, blood sugar falls and may produce hypoglycemia of the functional type. They also noted that 50 per cent of the

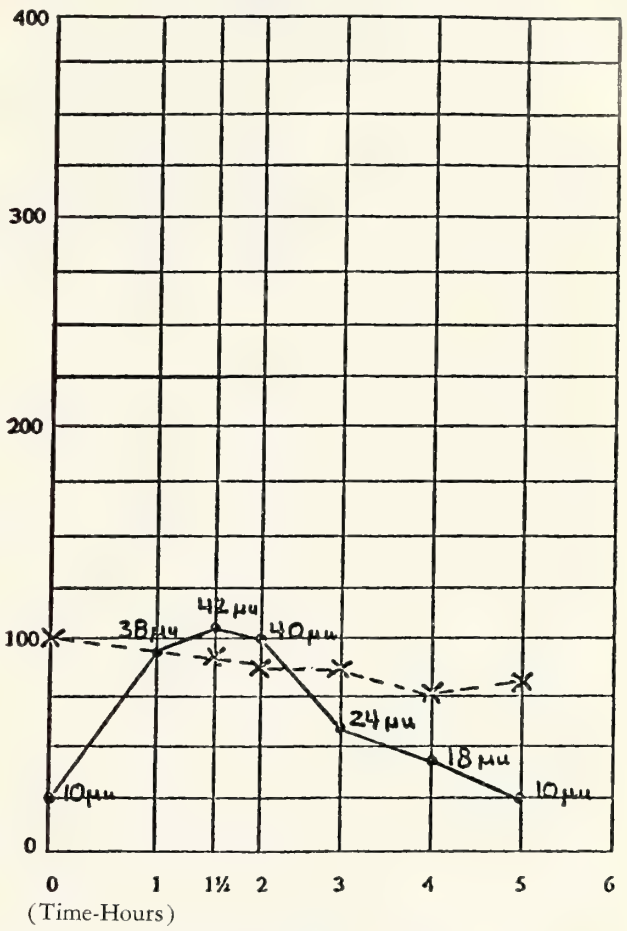
CHART NO. 3



Flat Glucose Tolerance Test
Low Immuno Reactive Insulin

Blood sugar (plasma) in mg %. Immuno reactive insulin assay in μ units/ml (μu) expressed on graph as % increase in basal level. - - - - Glucose tolerance curve. ——— Immuno reactive insulin assay curve. Shah, S., M.D., Stoffer, R. P., M.D., McReynolds, C. R., M.D.

CHART NO. 4



Flat Glucose Tolerance Test
Normal Immuno Reactive Insulin

Blood sugar (plasma)in mg %. Immuno reactive insulin assay in μ units/ml (μu) expressed on graph as % increase in basal level. - - - - Glucose tolerance curve. ——— Immuno reactive insulin assay curve. Shah, S., M.D., Stoffer, R. P., M.D., McReynolds, C. R., M.D.

GTTs performed during periods of stress were flat. Dasgupta,[6] *et al.* consider a flat GTT as a normal variant, but conjectured a burst of insulin release modifying the blood sugar level in response to the oral glucose load, provided malabsorption and hypothyroidism were excluded.

Altschle,[7] *et al.* noted abnormal GTTs in chronic hallucinating disorders, Korsakoff's psychosis, manic depressive psychosis, schizophrenic reaction, and involutional psychosis. They noted a rise in blood sugar but did not comment on the mechanism.

Aleksandrowicz,[8] *et al.* noted raised blood sugars and delayed returns to normal in depressive reactions, while Grenville,[9] *et al.* noted a flat GTT in depressed patients.

We have noted here a flat GTT with anxiety, depression and psychosomatic illness, *i.e.,* tension headaches and spastic colon. Clinically, these patients usually showed a satisfactory response to tranquilizers, antidepressants, antispasmodics, and analgesics. Repeat GTT and IRI examinations are being planned to determine if there is a correlation between changes in emotional status and a change in their physiological responses.

Most of our patients with flat GTTs have normal insulin output—50 per cent—so we cannot say that excess of insulin is the cause of a flat GTT; 25 per cent have a high insulin output, and 25 per cent a low insulin output. There is a theoretical possibility of a gastrointestinal factor in emotionally disturbed individuals, causing poor absorption of glucose without interfering with absorption of fat, protein, and minerals.

We also have noted that patients with flat GTTs and vaginitis do well when they are put on high protein/

(Continued on page 267)

Progress Report

Autogenic Feedback in Migraine Headaches

JOSEPH D. SARGENT, M.D., JAMES B. TAYLOR, Ph.D., LOLAFAYE COYNE, Ph.D., PAUL E. THETFORD, Ph.D., E. DALE WATLER, M.A. *and* JOHN A. SEGERSON, M.D., *Topeka*

PREVIOUSLY, we have reported positive clinical results in the treatment of migraineurs, using autogenic feedback training to increase hand blood flow.[1–3] In those reports, the clinicians scanned case material to assess change in headache activity. Such assessments are liable to many sources of error, since the symptom and the assessment are subjective. Later, a more objective measure of migraine improvement was developed and the authors, using this measure, report the results of biofeedback training with 74 migraine sufferers over a 270-day training period. Also, information on attrition rate for patients undergoing this training, and the success rate for sustained learning in increasing hand blood flow, is included in this report.

Daily records of headache frequency were kept for 74 migraine sufferers, which rated the intensity of headache on a 4-point scale. Of these patients, 54 kept records for a baseline period of 90 days prior to biofeedback training and for 270 days after the inauguration of training; 20 kept records only from the inauguration of training to the 270th day. These self-reports served as the basis for estimating the level of headache activity and percentage of headache reduction.

"Level of headache activity" may be regarded as a function of headache *frequency,* weighted by headache *intensity,* over a specified duration of time. Reduction in headache activity is shown if the level of headache activity is higher before training or in the early part of training, than at the end of the training period. The percentage of *headache reduction* may, therefore, be expressed as an increment score in the form of: $(y-x)/x$, in which x equals number of headache episodes, with each multiplied by intensity rating for the initial 90-day baseline periods, and y equals number of headache episodes, with each multiplied by intensity rating for the last 90-day period (days 181-270). For the 20 patients with no pretraining data, the first 90 days of training and followup were used to obtain their score for x. Statistical analysis showed the percentage reduction to be independent of initial level of headache activity ($r = -.07$). Thus, the increment score may be used as a measure of headache reduction without further correction.

Presented at the annual meeting of the Kansas Chapter, American College of Physicians, Topeka, February 21, 1975.

Address reprint orders to: Joseph D. Sargent, M.D., The Menninger Foundation, Box 829, Topeka 66601.

The results of biofeedback training with 74 migraine sufferers over a 270-day training period are reported.

The headache reduction scores for 74 patients completing 270 days of training were grouped into five categories as shown below:

% Reduction in Headache	*Categories of Improvement*	*No. of Patients* OLD GROUP	NEW GROUP	*Total No. of Patients*
0-9	No improvement	9	3	12
10-25	Slight improvement	7	0	7
26-50	Moderate improvement	19	3	22
51-75	Good improvement	11	5	16
76-100	Very good improvement	14	3	17
		60	14	74

The remaining 36 patients, originally accepted for treatment, did not complete the 270 days, representing a 33 per cent attrition rate as follows:

Attrition Rate	*Old Group*	*New Group*	*Total Number*
Total number accepted	82	28	110
Number completing 270 days	60	14	74
Number dropping out before 270 days completed	22	14	36

Although the influence of placebo effects on these results cannot be estimated without a more controlled study, we believe that the obtained level and duration of improvement may not be attributable to placebo (or relaxation training) alone, since most of these patients had proved poorly responsive to traditional treatment. A controlled, clinical study, now inaugurated, should

provide a more definitive answer to this question.

Application of this treatment modality is dependent on the patient's ability to master two skills: (1) the voluntary control of vasodilation in the hand, using a mechanical biofeedback device called a temperature trainer; and (2) the continued voluntary control of vasodilation upon removal of this device. The second skill is possible only as the patient comes to associate proprioceptive cues (generally reported as "warmth," "fullness," or "throbbing") to vasodilation. Not all patients are able to master these two skills. It is of importance, therefore, to estimate the percentage of patients who are capable of learning voluntary control to the second stage, since negative results have been reported by another group.[4]

Preliminary figures are available for the 65 migraine patients who completed 30-90 days of biofeedback training, using a temperature trainer which measured absolute temperature in the right hand, and who were subsequently seen at monthly intervals after the trainer had been withdrawn. The second sample here reported differs from the first in that some subjects in the old group were trained with a temperature trainer which measured differential temperature change, rather than absolute hand temperature. In the posttraining sessions, the patient's ability to control hand skin temperature over a 5-15 minute trial was assessed. The training was counted "unequivocally successful" if the temperature showed a net increase of one degree or more in five out of five monthly sessions after training; it was counted "equivocally successful" if the temperature showed a one-degree or more increase in four out of five monthly sessions. Only four monthly assessments were available for the eleven patients who were counted as "presumably successful" when four trials showed a temperature gain of one degree or more. The degrees of training success for the 65 patients is shown below:

Unequivocal success	28 cases
Equivocal success	10 cases
Presumable success	8 cases
Unsuccessful	19 cases

In short, 70 per cent were judged successful in dilation of their hand vasculature at will, even after withdrawal of external feedback.

In conclusion, our preliminary work in using vasodilation of the hand vasculature to control migraine headaches suggests that this may be a useful additional therapeutic modality for migraineurs, but conclusive proof needs to be provided by a controlled clinical study, a task that we have already initiated as of January 1975.

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Flat GTT

(Continued from page 265)

low carbohydrate diets without local treatment for vaginitis. One may wonder whether most flat GTT individuals are prediabetics. Whatever the reason for flat GTT may be, it is evident that malabsorption is not the only cause for flat GTT curves.

Summary

Out of 2,500 GTT tests, it was noted that 252 patients had a flat GTT: 50 per cent have a normal insulin output; 25 per cent a high insulin output, and 25 per cent a low insulin output. Most of the patients were between 36 and 54 years of age; the majority of the patients had psychosomatic complaints (tension headaches and spastic colon): 20 per cent had a diagnosis of anxiety and depression; 15 per cent had vaginitis which responded to a high protein/low carbohydrate diet. Patients with hypoglycemic symptoms responded to high protein/low carbohydrate diets, along with tranquilizers or antidepressants.

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Nail-Patella Syndrome

A Report of a Kansas Family

DENNIS ROSS, M.D.* *and* **HUGO WEBER, M.D.,**** *Wichita*

NAIL-PATELLA SYNDROME (osteo-onychodysplasia) is an inherited disorder which is transmitted as an autosomal dominant trait. The incidence is unknown but it was once thought to be rare. It has been reported, however, with an increased frequency over the past ten years. Skeletal abnormalities predominate in these patients. A glomerulopathy is known to occur and is characterized primarily by asymptomatic proteinuria, but occasionally progresses to renal failure.

Case Report

The propositus, a 28-year-old female, was being evaluated for hypertension. She was known to have had an elevated blood pressure since age 15, at which time it was 150/100. There was no history of renal disease or endocrine disorders. There was, however, a strong family history of hypertension. Her father died of a cerebrovascular accident (CVA) at 75 years of age, and was known to have hypertension. Her mother is 59 years old, and has a history of mild hypertension. A fraternal twin sister had glomerulonephritis at age 12. The patient's past medical history was unremarkable except for dental caries requiring total extraction. On physical examination her blood pressure was 140/100. She presented an interesting habitus with a height of 4 feet 11 inches, and a body weight of 44.1 Kg (97 lb). Funduscopic examination was normal. Her lungs were clear. Examination of the heart revealed a normal sinus rhythm without murmurs. There was no evidence of cardiac enlargement. The remaining physical examination was entirely normal except for an increased carrying angle of both arms and a prominent scoliosis. The following laboratory tests were normal: CBC, urinalysis, and serum electrolytes. ANA was negative. VMA was 3.7 mg/24 hr (N = 1-8 mg/24 hr). A 24-hour urine for creatinine clearance was 50 ml/min. A hypertensive IVP with nephrotomograms revealed prompt and synchronous excretion of dye bilaterally with normal kidney size and position. Iliac horns and a hypoplastic pelvis pathognomonic of the nail-patella syndrome were found *(Figure 1)*. Hand x-rays revealed fusion of the multangular bones. There was rotoscoliosis of the spine.

A family with nail-patella syndrome is described, the propositus presenting with hypertension and renal impairment, with absent albuminuria and normal urine sediment.

Hypoplastic patellae with lateral subluxation was present bilaterally on x-rays of the knees *(Figure 2)*.

The patient's ten immediate family members were examined, including her mother, three siblings, one stepsister, and five nephews and nieces *(Figure 3)*. A urinalysis was performed on two occasions on these ten family members. X-rays of their pelvis, elbows, and knees were also performed. Medical records were obtained on family members living too distant to be examined. *Table I* summarizes the information.

TABLE I

	Number Affected/ Number Examined
Pelvis abnormalities	
Iliac horns	3/11*
Inferior beaking	3/11
Nail dysplasia	4/11
Patellar dysplasia	6/11
Increased carrying angle of elbow	4/11
Dental dysplasia	4/11
Proteinuria—intermittent (trace to 1+)	3/11
Hypertension	4/11†
Persons displaying 2 or more features of the nail-patella syndrome	4/11‡

* One of these 3, a 4½-year-old niece of the propositus, had suggestive iliac horns. No definite conclusion can be made until she reaches skeletal maturity.

† B.P. was elevated on at least one reading.

‡ Three of these 4 had elevated blood pressure on at least one reading.

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Figure 1. Iliac horns and hypoplastic pelvis/pathognomic of the nail-patella syndrome are found in this pelvic x-ray of the propositus. (Iliac horns are marked by arrow.)

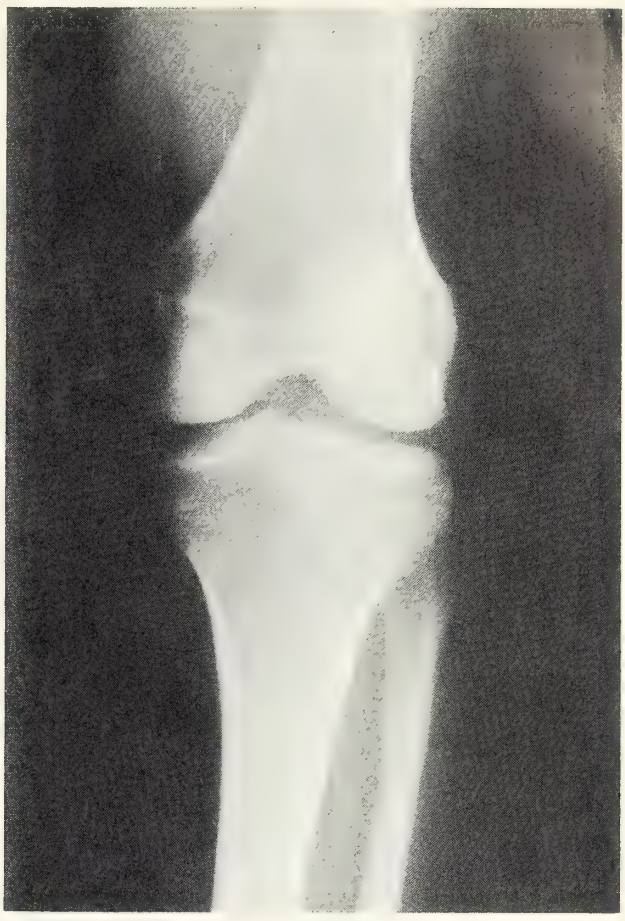


Figure 2. Hypoplastic patella with lateral subluxation can be seen.

Discussion

Little,[1] in 1897, first reported the association of the fingernail and patellar abnormalities in the nail-patella syndrome. Turner,[2] in 1933, further described the syndrome in more detail, and Thompson[3] pointed out the frequent occurrence of iliac horns. Lester[4] described the peculiar cloverleaf deformity of the iris in individuals with the nail-patella syndrome, however, this abnormality has been found as a normal variant in healthy individuals. Renal dysplasia in the nail-patella syndrome was described by Hawkins and Smith[5] in 1950, and is manifested by albuminuria and microscopic hematuria.

The skeletal, eye and nail abnormalities, while an interesting facet of the defect, usually cause no significant dysfunction. Individuals may complain of easy dislocation of the patellae, frequent backaches, and brittleness of the nails. These symptoms, however, usually do not limit productive function. The renal abnormalities are also relatively benign. The majority of individuals have asymptomatic proteinuria for years and rarely progress to renal failure.[6] Renal biopsy studies in the nail-patella syndrome have been performed. On light microscopy there is focal sclerosis with increased mesangial matrix, but no hypercellularity. There is focal, segmental basement membrane thickening which is confirmed by electron microscopy.[7] A consistent finding on microscopy is the presence of lucent areas within the thickened basement membrane and fusion of the foot processes.[8] Collagen-like fibrils are seen in the basement membrane similar to those that have been described in diabetes mellitus, and lobular glomerulonephritis.[9–10] Immunofluorescent studies have been variable. There may be no deposition of immunoglobulin, trace deposition of IgG, IgM and C_3, or extensive deposition of immunoglobulin along the basement membrane. The glomerulopathy may progress to end-stage renal failure. Renal transplantation has been successfully performed for the renal failure of nail-patella syndrome.[11] The diagnosis can be made in infancy,[12] but is more easily detected after maturation of the skeleton (*i.e.*, a niece of the propositus probably has nail-patella syndrome, however, her suggestive iliac horns will re-

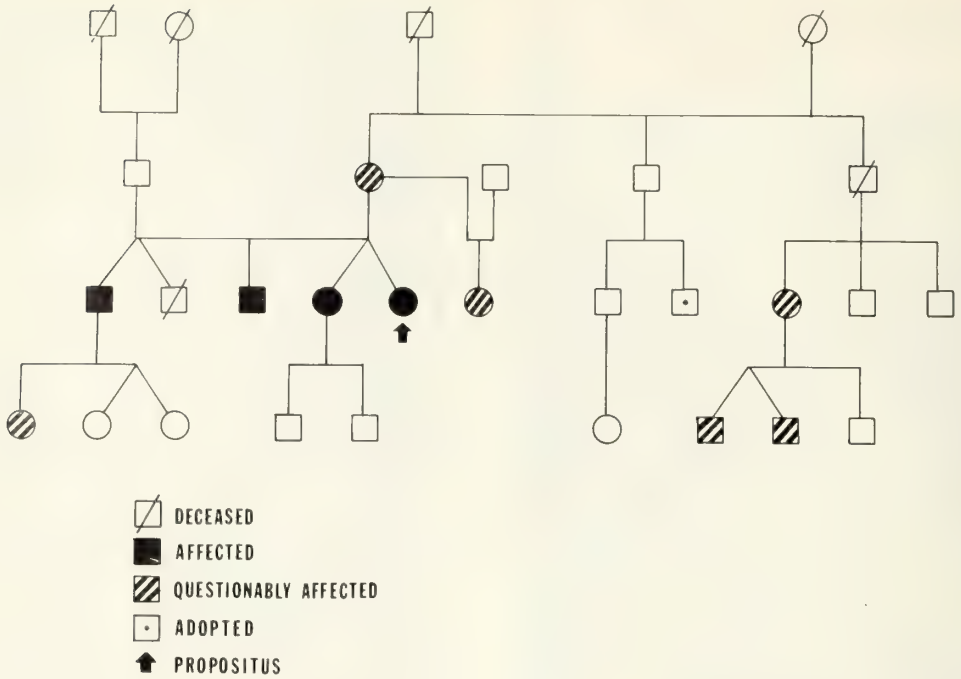


Figure 3

quire maturation before a definitive diagnosis can be made). Skeletal complaints may prompt x-rays of the knees, elbows, or back which will in turn lead to the diagnosis. Asymptomatic proteinuria detected on urinalysis may prompt renal evaluation leading to the diagnosis.

The propositus in our study presented with a classical pattern of the nail-patella syndrome. She had been treated intermittently for back pain secondary to rotoscoliosis of the spine. Many dental caries necessitated total extraction. Finally, hypertension prompted an intravenous pyelogram and iliac horns pathognomic of the nail-patella syndrome were discovered. An investigation of her family uncovered three siblings with definite evidence of the nail-patella syndrome and six relatives with suggestive evidence. Surprisingly, two of three siblings having the syndrome (a twin sister and a brother) were hypertensive on initial examination. Her fraternal twin sister was on a regimen of oral contraceptives, which was subsequently stopped. Repeat blood pressure examinations four months later revealed mild diastolic hypertension (90 to 92 mm Hg) on three of four blood pressure checks. It is noteworthy, however, that these affected people are relatively young to have developed elevated blood pressure. Also, the propositus presented to us for evaluation of hypertension only later discovered to have the nail-patella syndrome. One might suspect that the glomerulopathy of the nail-patella syndrome may be the etiology of her hypertension, because there was evidence of reduced renal function on an endogenous creatinine clearance in the propositus.

Summary

Twenty-two living members of a family encompassing three generations constitute a group manifesting the nail-patella syndrome (hereditary osteo-onychodystrophy). The propositus, a 28-year-old white female presented with hypertension present since age 15. Her initial blood pressure was 150/100, but has been as high as 182/120. Intravenous pyelography demonstrated normal renal outline and function, but posterior iliac horns pathognomonic of nail-patella syndrome were discovered. Fingernail dysplasia and bony abnormalities were present including, hypoplastic patella with lateral subluxation, fusion of the multangular bones, and rotoscoliosis of the spine. Dental dysplasia and caries necessitated total extraction at age 15. Albuminuria was absent on a concentrated specimen of urine and endogenous creatinine clearance measured 50 ml/min.

The syndrome in this family is believed to be transmitted through maternal inheritance, as suggestive findings are present in maternal relatives. Moreover, the mother has one daughter by a previous marriage who demonstrates lateral displacement of patellae. Two of five siblings of the propositus were found to have posterior iliac horns. Three were found to have patellar abnormalities, and two were found to have dental dysplasia. Interestingly, two siblings, ages 28 and 30, had an elevated random blood pressure. Albuminuria was absent in all siblings and endogenous creatinine clearance has not yet been determined. One niece, age 4½

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Colonoscopy

Fiberoptic Colonoscopic Polypectomy

RICHARD M. SKIBBA, M.D., WILLIAM A. HARTONG, M.D. ***and***
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TECHNICAL ADVANCES in fiberoptics and their application to endoscopic instruments during the past twenty years have revolutionized the diagnosis and therapy of many gastrointestinal disorders. These instruments were utilized initially for examination of the upper gastrointestinal tract, but more recently have been employed in the diagnosis and therapy of colonic disease.

In 1969, Wolff and Shinya[1] introduced fiberoptic colonoscopy in the United States. Shortly thereafter, many institutions, including the University of Kansas Medical Center,[2] began utilizing this procedure.

During the period of September 1970 through December 1974, a total of 270 fiberoptic colonoscopies have been performed by the Gastroenterology Division of the Department of Medicine at KUMC. This report retrospectively reviews our experience with the procedure during that time.

Equipment

The 86-cm-long model CF-SB Olympus colonoscope was used for the initial 108 procedures. It is illuminated by a cold light source that does not transmit heat to the tip of the instrument. The tip of the scope can be flexed only 60° up or down, and the entire instrument must be rotated to turn the tip laterally. This instrument is now outdated.

The 186-cm model CF-LB Olympus colonoscope has been used almost exclusively for the last 162 colonoscopies. It is illuminated by a cold light source that does not transmit heat to the tip of the scope. The outer diameter is 14 mm. The entire shaft is flexible and is connected to a distal bending section which can be rotated through a 240° arc in both the up-down and right-left directions by operation of knobs on the control unit. There is a channel for aspiration or passage of biopsy forceps, cytology brush, water pick, or polyp snare. The fixed focus optical system has a 60° view field with a 1 to 10 cm observation range. A camera with an automatic synchronization circuit can be attached to the eyepiece.

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Technique

The bowel preparation for the majority of patients consisted of three days liquid diet, 10 oz. magnesium citrate the evening before, and saline enemas the morning of the study. A clear liquid breakfast is allowed on the morning of the procedure. If the patient has active inflammatory bowel disease, the magnesium citrate is omitted.

Recently, in our medical center, a "saline load" preparation has been employed in patients who do not have renal or cardiovascular disease. The patient is required to drink 3,500 ml of chilled, unflavored electrolyte solution containing 150 mEq Na^+, 30 mEq HCO_3^-, 10 mEq K^+, and 130 mEq Cl^- over a one-hour period, three hours prior to the procedure. This allows the patient to eat a regular diet until the morning of the procedure, and no enemas or laxatives are administered. Both preparations are effective, but the saline load is preferred by the patients and has the advantage of requiring less time.

For the past 12 months, all colonoscopies have been done in the radiology department with utilization of fluoroscopy. This is done primarily to verify the location of the tip of the colonoscope, but is also used to aid manipulation of the instrument in the sigmoid colon and at the flexures.

Most inpatients are premedicated with meperidine 50 mg and promethazine 25 mg intramuscularly, and are then given diazepam intravenously, slowly, until very drowsy. Additional intravenous diazepam is given during the procedure as needed. Diazepam alone is used in outpatients.

With the patient on his left side, a digital rectal examination is performed and the lubricated colonoscope then inserted into the rectum and advanced through the sigmoid colon with the lumen in view. The patient is then turned supine and the colonoscope advanced with the lumen in view to the desired level. Occasionally, it is necessary to use the "slide by technique" for part of the procedure. This involves advancing the colonoscope without the lumen in view, but being certain that the scope is advancing by virtue of seeing the mucosa sliding by. The colonoscope is then slowly withdrawn with careful examination of the colonic mucosa, covering

its entire circumference for the full length of entry. Biopsies, brushings, washings, photography, and polypectomies are done as lesions are encountered during withdrawal.

In this review, if the area in question on the barium enema (BE) is adequately examined, the procedure is considered a success. If the barium enema is normal or if the patient has a polyp, the procedure is not considered a success unless the entire colon is examined. During the past 18 months, insertion to the cecum has been attempted in every patient. This has not been pursued vigorously if the patient is uncomfortable, but the area in question on the barium enema has been reached.

Results

The patients ranged in age from 5 to 86 years. The indications for colonoscopy are listed in *Table I.* The miscellaneous indications were: to determine the extent of pseudomembranous colitis, 3 patients; removal of a colonic foreign body, 2; inspection of a rectosigmoid stump, 1; to perform sigmoidoscopy in a bedridden patient, 1; and determination of extent of irradiation inflammation, 1.

The most common lesions, other than diverticula, are listed in *Table II.*

Fifty-nine patients with a normal barium enema or one that showed only diverticula underwent diagnostic colonoscopy for unexplained hematochezia, melena, or occult blood in their stool. A lesion that could explain the blood loss was found in 20 patients *(Table III).* In four patients, total colonoscopy was accomplished without finding a lesion. In 35 patients, the cecum was not reached and a lesion not found in the area examined, so those procedures were considered unsuccessful.

Of the 270 colonoscopies, 152 (56%) were considered successful by the criteria listed previously. Both the success rate and number of procedures have increased steadily with time, starting with 16 of 44 (36%) the first year and progressing to 33 of 40 (82%) the first four months of the fifth year *(Figure 1).*

After the long colonoscope became available, insertion to the cecum was accomplished in 7 of 50 (14%) patients the first year; 17 of 70 (28%) patients the second year; and 21 of the last 40 (52%) patients included in this review.

In 170 patients, the colonoscopic finding and the barium enema could be compared *(Table IV).* There was agreement in 91 (54%) studies. An abnormality present on barium enema was not found by direct visualization at colonoscopy in 37 (22%). In 34 (20%) a second lesion was found in addition to the one indicated on the barium enema. In 8 (4%) the abnormality present on the barium enema was not found by direct visualization, but an unexpected lesion was found in a different location.

TABLE I
INDICATIONS FOR COLONOSCOPY

Indication	*No.*	*%*
Abnormal BE	168	62
Hematochezia	37	14
Determine extent or activity of IBD*	26	10
Occult G.I. blood loss	22	8
Diarrhea, abd. pain, weight loss	9	3
Miscellaneous	8	3
Total	270	100

* Inflammatory bowel disease.

During the past 28 months, a total of 33 polypectomies have been performed in 18 patients. Of the 29 polyps recovered, there were 12 benign adenomas, 10 mixed villous-adenomatous polyps, 3 juvenile, and 2 hyperplastic. There was one villous adenoma and a single lipoma. Two mixed villous-adenomatous polyps contained carcinoma. There were no complications of polypectomy.

During the past 12 months, fluoroscopy has been used routinely. Fluoroscopy time has ranged from 0 to 11 minutes, with an average of 4.3 minutes. During this period, 75 per cent of the colonoscopies have been successful.

There has been only one complication in 270 colonoscopies. That patient had almost complete sigmoid obstruction. Air insufflation during the colonoscopy, resulted in marked cecal and small bowel dilatation, because the patient was unable to effectively pass gas after the procedure. She required passage of a nasogastric tube and was decompressed without difficulty.

Discussion

Fiberoptic colonoscopy has proven to be a useful

TABLE II
LESIONS FOUND BY COLONOSCOPY

Lesions	*No.*
Polyps	53
IBD*	37
Benign stricture	21
Nonspecific inflammation	9
Carcinoma	6
Gardner's syndrome	4
Pseudomembranous colitis	3
Vascular lesions	2
Foreign body	2

* Inflammatory bowel disease.

TABLE III

LESIONS FOUND IN PATIENTS HAVING HEMATOCHEZIA, MELENA, OR OCCULT BLOOD IN STOOL WITH NORMAL BE (n = 20)

Lesions	*No. of Pt.*
Polyps	8
Ulcerative colitis	4
Mass lesion	2
Cecal A-V malformation	1
Radiation ulcer	1
Nonspecific ulcer	1
Superficial erosions	1
Nonspecific inflammation	1
Diverticuli	1

clinical tool. The indications for employing this procedure include an abnormal barium enema, occult gastrointestinal hemorrhage, hematochezia, determination of extent and activity of inflammatory bowel disease, and a variety of other problems ranging from removal of a foreign body from the colon to ruling out serious colonic disease in patients with unexplained diarrhea with abdominal pain or weight loss.

Colonoscopy appears to be more accurate than barium enema. The 46 per cent incidence of disagreement in our series between barium contrast studies and colonoscopic findings emphasizes the diagnostic utility of fiberoptic colonoscopy in patients whose barium enema is abnormal. In studying patients with hematochezia or occult gastrointestinal blood loss, 20 (34%) of 59 colonoscopies revealed lesions not detected by barium contrast studies, and in 4 other patients a negative barium enema was confirmed by total colonoscopy. Thus, colonoscopy is clearly indicated in such patients when they are not actively bleeding. Because of the technical skill and time involved in colonoscopy, and the accuracy of barium enema in identifying many lesions with certainty, roentgenological contrast studies should still be performed before colonoscopy in the evaluation of patients with suspected colonic disease.

Fiberoptic colonoscopy has proved useful in circumventing abdominal surgery in many patients. The colonoscope can be used for polypectomy, biopsy and foreign body removal, all of which formerly required laparotomy. Direct visualization of the colonic mucosa with the colonoscope often clarifies the barium enema (22%), thus obviating surgical exploration.

TABLE IV

CORRELATION OF COLONOSCOPIC FINDINGS AND BARIUM ENEMA (BE)

	%
Both agree	54
BE abnormal—colonscopy normal	22
BE Abnormal—additional lesion found by colonoscopy	20
BE falsely abnormal—colonoscopy abnormal	4

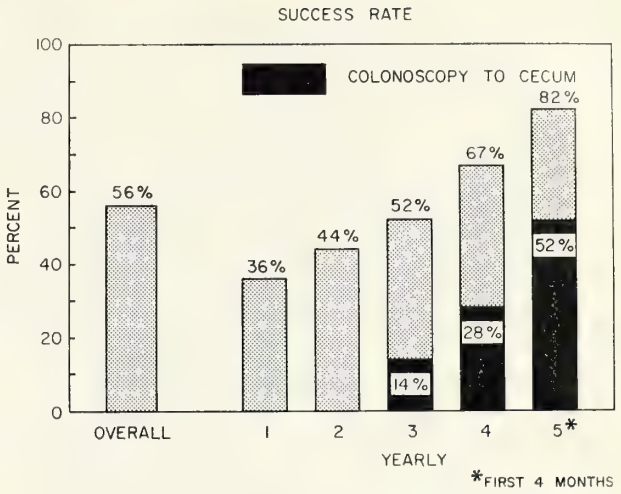


Figure 1. Overall, yearly and total colonoscopy success rate at KUMC over the past 4⅓ years.

Our success rate has improved progressively over the past four years. This is felt to be due to the use of improved colonoscopes, employment of fluoroscopy, good patient preparation, and most importantly increased experience.

Fiberoptic colonoscopy is a safe procedure in experienced hands[1] with complications more likely to occur during procedures by inexperienced colonoscopists.[3] Complications encountered by others include bleeding, perforation, mesenteric air dissection,[4] and serosal lacerations.[5] Our only complication was marked cecal and small bowel distention requiring placement of a nasogastric tube for decompression. That patient had almost complete sigmoid obstruction secondary to diverticular disease and, perhaps, manipulation with the colonoscope produced increased edema with temporary complete obstruction. There were no fatalities in our series.

The use of fluoroscopy during colonoscopy was often necessary to obtain a successful examination. The average exposure time of 4.3 minutes is approximately twice the radiation exposure incurred during a routine barium contrast study. With increasing experience less fluoroscopy time has been needed, but it remains important to have it available.

Summary

A retrospective review of 270 fiberoptic colonoscopies performed by the Gastroenterology Division at KUMC

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Friday, Already?

The T.G.I.F. Syndrome–Response to Stress

W. WALTER MENNINGER, M.D., ***Topeka***

LIFE IS A CONSTANT process of adaptation by the human organism to its environment, in search of what Dr. Karl Menninger has labeled the vital balance.[1] Inevitably, there are breakdowns in that adaptation, maladjustments which are manifested in a wide range of behaviors. Illness represents one class of maladaptation which comes within the province of the physician.

In recent years, physicians have studied coping efforts and why patients fall ill.[2–4] Various rating scales of life events have been developed and correlated with the incidence of illness according to the degree of stress they put upon the organism's adaptational capacity.[5–13] Most clinical practitioners are keenly aware of the relationship between certain stressful events and the onset of illness. In many instances, the illness develops in the midst of the stress, as in the case of a school principal who required hospitalization for coronary insufficiency in the midst of a community crisis involving his school.

There is another group of symptom reactions or illnesses which become evident only *after* the stressful event has been experienced, at which point it is safe for the individual to let down. During the period of stress, the individual has the capacity to rise to the occasion and sustain an adequate level of adjustment, giving little or no evidence of strain to himself or to others. Then, when the stressful pressures are removed, the individual becomes aware of how much energy and effort were required to meet the demand. Some degree of exhaustion is perceived, along with the development of additional symptoms which may range across the whole spectrum of illness. Insofar as the onset of illness parallels the kind of letdown evident when a task is completed or at the end of the work week, it may be considered a kind of "T.G.I.F. Syndrome" (Thank God, It's Friday).

Four case illustrations are provided which represent the range of symptoms and illness which may be encountered as a T.G.I.F. syndrome.

Case One—Minor Symptomatology

A 23-year-old medical student, in good general physical health, reported a repeated problem with canker sores, herpes simplex labialis. He noted that the sores consistently developed in relation to academic examinations, always becoming apparent at the point when he had completed his studying or while he was taking the examination. The sores followed a consistent one-week course before clearing.

Case Two—Moderate Incapacitation

A 28-year-old white male, white collar worker, in good general health, voluntarily took on an additional job assignment which was not really required of him. The assignment did indirectly benefit him, giving him some added knowledge about his regular work; however, he had mixed feelings about the assignment as time went on. Feeling a pressure to complete it, he decided to work on the assignment during a holiday. On the way to the office, he first noted a visual scotoma which he had never before experienced. Subsequently, he had malaise, nausea and vomiting, and the symptoms progressed to a full blown classical migraine headache, which effectively incapacitated him for the day.

Case illustrations are provided which represent the range of symptoms and illness which may be encountered as a T.G.I.F. Syndrome.

Case Three—Severe Incapacitation

A 43-year-old junior executive of a firm with 750 employees was left in charge of the plant operations while the two senior executives were attending out-of-state meetings. During this period, a crisis developed among the line personnel who threatened to strike. The executive was involved in a series of emergency meetings with all shifts of personnel, and successfully forestalled precipitous action by the personnel. He prepared a report of his actions and findings for the senior executives. On their return, the most senior executive decided to meet with the personnel himself, without reading the report prepared for him. One week later, the junior executive developed an acute upper respiratory infection, with

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fever of 103 F, leucocyte count of 17,000 cells, and symptoms of general malaise and pharyngitis which cultured no specific pathogenic organism. The illness persisted with general flu-like symptoms, fever and sore throat for a week.

Case Four—Profound Incapacitation

A 25-year-old air force officer in World War II was in good health and performed uneventfully on his bombing missions over enemy territory. He experienced no special physical reactions to fear or anxiety until the last of his missions before his return to the United States and the non-combat status. On that mission, he was asymptomatic until the plane was back over friendly territory and safe. At that moment, he experienced profound nausea, vomiting, and abdominal distress. The symptoms persisted and were of such intensity and duration that he required immediate medical treatment on landing, and remained incapacitated for four days.

Discussion

Stress occurs when an organism is forced into strenuous effort to maintain essential functions at a required level. When an additional load is placed on the organism, in order to maintain adequate functioning, some compensatory efforts must be made. Dr. Karl Menninger has described various levels of compensatory activity or "special regulatory maneuvers" in his discussion of the vital balance. The coping phenomenon was also observed by Ruff and Korchin[14] in a study of adaptive stress behavior in astronauts. In this study, Ruff and Korchin observed that the astronauts remained sharp and effective during the pre-flight and flight periods, but tended to be somewhat less clear thinking, less energetic, and more anxious after the flight was over.

Ruff and Korchin equated their observation with what other investigators have labeled the "end phenomenon." Basowitz and colleagues[15] encountered the phenomenon in a study of paratroopers in training. They preselected two groups of men on the basis of initial hippuric acid excretion levels (a biochemical measure previously found to be related to anxiety). One group was predicted to be more, and the other less, likely to become anxious under the stress of jumping. The group which was expected to be less anxiety prone did in fact function better and expressed less anxiety throughout the training period. But the daily measurements were continued to the day *after* graduation. And on that day, the low group showed decidedly higher levels of anxiety and related physiological and psychological measures of anxiety. Apparently, they had the capacity to block the disturbed responses during training, only to relax the controls after they had passed the crisis.

Grinker and Spiegel[16] reported a comparable phenomenon during the war, observing that anxiety attacks often occurred following withdrawal from a combat zone, much as reported in Case 4. Other observers of war casualty situations have been astonished to note that when the wounded were brought into combat hospitals, only one out of three complained of enough pain to require morphine. Most of the soldiers either denied having pain from their extensive wounds or had so little that they did not want any medication to relieve it. These men were not unable to feel pain, for they complained as vigorously as healthy men at an inept vein puncture.[17]

Discussing the end phenomenon, Ruff and Korchin[14] note: it is as though the individual's adaptive mechanisms come to work best when they are needed most, and that he permits himself to suffer many of the disturbances when it doesn't matter so much.

Levi[18] discusses three essential phases in the adaptational process of the individual to stress: alarm reaction; resistance to the invasion; and exhaustion. The most common manifestation of the T.G.I.F. syndrome is a simple kind of exhaustion, with conscious awareness of the demands to which one has had to respond. Yet, for a considerable number of individuals, there is more clearly an illness response. The classical migraine headache occurs after the stress; and the poorly understood "stress ulcer" after severe trauma characteristically develops 6-14 days after the initial injury.[19] Experimental study by Brady,[20] of ulcers in "executive" monkeys found the gastric acid secretion did not occur during the work situation, but it did appear afterwards, in the rest period.

What actually prompts illness is still unclear, but a number of factors come into play. These include the motivation of the individual, his personality strengths or ego resources, his learned patterns of dealing with or defending against stress, and the resources or supports in the environment. The illness itself may represent an additional stress; however, in this context it more likely serves a number of other psychological functions. It may represent a resolution for the anger and resentment toward the stress experience; it also is a regression of behavior which allows the individual to get some compensatory attention, to escape from regular responsibilities and have reduced demands upon him, to have a period of dependency which is acceptable and for which he does not have to feel guilty. Sick leave is justifiable leave from work. It allows time for an individual to recuperate and regain a sense of balance after the stress.

In every case, although the physician rarely thinks of illness in such terms, illness represents an instance where the limits of successful adaptation of the individual have been exceeded. Most individuals seek to deny their limitations, despite the reality that we all have limits.

The reaching of limits may be clearly evident in the physical or psychological symptoms noted during or following the stress. Clearly, some life events challenge the adaptive capacity of the individual more than others, giving rise to the scale of life events and the determination of life change units as a predictor for illness.

The special significance of the T.G.I.F. syndrome is related to the degree to which it signals the limits of an individual; in effect, the symptoms or illness signal that the ultimate limits of the individual's adaptational capacity have been approached. The patient may not realize the significance of the illness, and it is important to help the patient become aware of his limits as reflected by the syndrome. Further, besides having time to recover from the stressful experience, the patient may need some help in accepting limits and not feeling guilty at having limits.

From a preventive medicine standpoint, the physician should carefully assess the significance of the illness as a symptomatic expression of the patient's limits. It may be possible to predict the likelihood of repeated episodes of comparable stress in the patient's life, as well as estimate the patient's capacity to deal with future stress. The patient should be advised accordingly.

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Nail-Patella Syndrome

(Continued from page 270)

years, is being treated for talipes equinovarus and has suggestive posterior iliac horns.

Acknowledgments

Valuable assistance was provided by Theil L. Bloom, M.D. and the Radiology Department of the Wichita Clinic.

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Aldosteronism—Hypokalemia

Adenocarcinoma of Adrenal Gland

SHARFUDDIN SHAH, M.D., CHARLES R. McREYNOLDS, M.D., DONALD D. DECKER, M.D. *and* WILFORD D. HOOFER, M.D., *Halstead*

PRIMARY ALDOSTERONISM is associated with excessive aldosterone production by the adrenal gland with stimulus within the gland. In 1956, Conn[1] described aldosterone-producing adrenal adenoma, labeled "The Conn Syndrome." About 400 cases have been reported, of which 75 per cent are adrenal adenomas. Aldosterone-producing adrenal carcinoma is relatively rare. The following case report is notable in presenting with severe hypokalemia due to hyperaldosteronism from adrenal carcinoma.

Case Report

A 68-year-old white female complained of fatigue, swollen ankles, frequency of micturition, shortness of breath, and loss of 20 pounds of weight. Physical examination revealed a well-developed, cooperative, alert female with blood pressure of 130/78 mm Hg. Auscultation of the chest revealed a few basilar rales; there was a grade II early systolic ejection murmur at the lower-left sternal border. The abdomen was soft and flat with no palpable masses. There was a trace of pretibial edema and severe ecchymosis over the legs.

Laboratory tests produced the following results: urinalysis, albumin 2+; hematology within normal limits; blood serum profiles showed serum chloride below 70 mEq/l; serum potassium, 1.2 mEq/l; serum sodium, 145; glucose, bilirubin, creatinine, uric acid were normal. Liver function tests were abnormal; SGOT, above 250 mU/ml; CPK, 1200 mU/ml; alkaline phosphatase, 80 mU/ml; total serum protein, 5.5 gm with a normal albumin and globulin ratio. Thyroid function test was normal. Twenty-four-hour urine collection was done and the aldosterone level was 95 mcg. On re-check it was 98 mcg (normal, 5-20 mcg). The values for 17-ketosteroids, 17-hydroxyketogenicsteroids, and 17-ketosteroids were within normal limits.

Radiological studies revealed normal heart size; lungs were clear. The intravenous pyelogram (IVP) and nephrotomograms confirmed a mass 9 cm in diameter at the upper pole of the right kidney; liver scan showed enlargement of the liver with a large filling defect. Paracutaneous liver biopsy was performed and the microscopic examination revealed adenocarcinoma of adrenal origin metastasizing to the liver. The results of barium studies were negative. This finding was confirmed by an exploratory laparotomy. The patient was given potassium intravenously, but her serum potassium level did not rise. She was started on Aldactone, 50 mg four times a day, after which the serum potassium rose to 4.1 mEq/l. She was also placed on 5-FU therapy and dismissed from the hospital on 5-FU injections, Aldactone—2 tablets twice a day, as well as potassium chloride —30 cc four times a day.

The patient was readmitted with the complaint of weakness, nausea, vomiting, and diarrhea. The 5-FU therapy was stopped. Serum potassium level measured 3.5 mEq/l. Liver function test was slightly abnormal. She was administered glucose intravenously and treated symptomatically. Her condition deteriorated and she died.

Discussion

The Conn Syndrome[1] is associated with adrenal adenomas in 75 per cent of the cases. The patients present with low serum potassium and high blood pressure. The above patient had adenocarcinoma, which is a rare finding. Conn found all of his patients had adenoma. Hutter *et al.*[2] reported that of the 138 patients with adenocortical carcinomas none had primary aldosteronism with adrenal carcinoma. Our patient had metastasis to the liver, which was locally spread. Hutter tried OPDDD on an experimental basis, but since our patient had metastasis to the liver we decided to use 5-FU therapy. Lauler[3] gave an excellent review of the preoperative diagnosis of primary aldosteronism, and Ross[4] has described aldosterone and its antagonists. Our patient did respond to Aldactone, but due to metastasis to the liver and general physical

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deterioration, the patient did not survive. Koppes[5] gave an excellent case report of his patient and reviewed the literature, but his patient had adenoma rather than adenocarcinoma. Our patient presented with congestive heart failure and hypokalemia rather than hypertension and hypokalemia, but with the help of aldosterone estimation, liver biopsy and exploratory laparotomy, it was confirmed that the patient had primary aldosteronism with adenocarcinoma. The end result, as expected, was that the patient could not survive.

Summary

A 68-year-old white female presented with congestive heart failure, hypokalemia and weakness, and was found to have an elevated urinary aldosterone and metastasis to the liver from adrenal adenocarcinoma on the right side, confirmed by exploratory laparatomy. She responded to oral Aldactone, but died due to metastatic disease and deterioration in general health.

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Colonoscopy

(Continued from page 273)

from September 1, 1970, through December 13, 1974, was presented. The indications for colonoscopy were abnormal barium enema (BE), unexplained hematochezia, determination of extent or activity of inflammatory bowel disease, occult gastrointestinal blood loss, and miscellaneous reasons such as foreign body removal.

The most common lesions encountered were polyps and inflammatory bowel disease. Colonoscopic findings and BE were in agreement only 54 per cent of the time, thus colonoscopy appears to be more accurate than BE.

The rate of successful colonoscopic examination increased from 36 per cent the first year to the present 82 per cent. There was only one complication and no deaths in the 270 colonoscopies.

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KMS MEETINGS 1975/76

	Wichita	Executive Committee	8:00 a.m.
November 16 (Sunday)	*Wichita*	House of Delegates	9:00 a.m.
	Wichita	Council Distr. 18	12:00 noon (luncheon)
18 (Tuesday)	*Kansas City*	Council Distr. 2 & 3	6:00 p.m.
November 28-December 6	*Hawaii*	AMA Clinical Session	
January 5 (Monday)	*Topeka*	Council Distr. 6	6:00 p.m.
18 (Sunday)	*Emporia*	Executive Committee	10:30 a.m.
	Emporia	Council Distr. 7	12:00 noon (luncheon)
	Emporia	Council	1:30 p.m.
February 20 (Friday)	*Topeka*	Executive Committee	6:30 p.m.
22 (Sunday)	*Topeka*	Auxiliary Officers	
March 21 (Sunday)	*Wichita*	Commissions	10:00 a.m.
	Wichita	Executive Committee	1:30 p.m.
April 11 (Sunday)	*Great Bend*	Executive Committee	10:30 a.m.
	Great Bend	Council	1:30 p.m.
May 2-5	*Salina*	117th Annual Session	

The President's Message

Professional Liability: The Coming Din of Inequity

In the turmoil of recent weeks, some insistent voices have tried to characterize the urgent appeals of the Kansas Medical Society for meaningful professional liability legislation as self-serving and contrary to the common good. This absurdity has been compounded by equally strident efforts by a few to portray some plaintiff's attorneys and a host of other self-anointed advocates as the dauntless champions of a multitude of "victims" of a heartless, careless, and undisciplined medical profession. The fatuous presumption that nearly everyone cares about patients more than do the physicians permeates much of what we hear.

It is time to set the record straight.

Kansas physicians—and their colleagues in the related health care professions—have a single-minded purpose undergirding the legislative proposals advanced by the Kansas Medical Society. This purpose is to restore and sustain an environment in which the physician, nurse, and other health care professionals need to place no reservations on their sincere motivation to apply the limit of professional knowledge and ability to the medical needs of the individual patient.

If the present legal climate of medical practice is permitted to deteriorate further, there will be a rapid acceleration in the not-so-subtle shift from a patient-doctor relationship grounded in compassion and concern to one in which the physician is forced to regard each patient as a potential adversary in a lawsuit. The effect of such a deterioration in the environment of medical practice on accessibility and availability of high quality professional health care services will be devastating. Only a few extraordinarily courageous physicians would any longer be willing to act at the limits of human life and the frontiers of medical science, where there is an irreducible proportion of less than perfect results of the kind responsible for the majority of claims for medical injury.

A large segment of the legal community, speaking through its established organizations, has publicly disclaimed any responsibility for the steadily worsening situation, declaring it to reflect a combination of a rising incidence of poor medical practice by an increasing number of incompetent physicians and unsound, perhaps even unsavory, practices by professional liability insurance carriers.

Both assertions are wanton fictions. In Kansas and elsewhere, the physicians who are being sued are most often among the highly qualified specialists who work in areas of patient care where the risks are high, even under the best of circumstances. A recent study by a respected national consulting firm indicates that far from being a source of lush profits for carriers, professional liability insurance premium rates may be set too low—even at today's rapidly rising rates—to take account of unrealistic expectations with regard to the results of medical intervention, and the growing tendency to seek compensation through claim or litigation when those expectations are not completely fulfilled.

The Kansas Medical Society has proposed a significant shortening of the statute of limitations, mandatory review of malpractice claims by an expert medical panel whose findings of fact would be admissible in evidence, limitation on the liability of the financially responsible insured health service provider, a sensible limit on awards, a shift in the proportion of award to favor the patient by reasonable scaling of the contingency fee system, and a regulated fund or pool derived from a surtax on the liability insurance premiums of health providers which would serve as the resource for awards beyond individual liability insurance limits. Especially important is the recommendation for a permanent legislative oversight committee to monitor and annually recommend needed changes in the law or regulations applicable to medical injury and professional liability.

In addition, the Kansas Medical Society has strongly supported specific measures designed to strengthen the authority and resources of the Kansas Board of Healing Arts, provide civil immunity for those working in good faith in the peer review and disciplinary processes within the health care professions, and require demonstration of participation in continuing education as a condition for extension of the privilege to practice medicine in Kansas. We also endorse the mandatory reporting and analysis of claims experience by professional liability insurance carriers, stepped-up programs of claims prevention in health care institutions, professional education which focuses specifically on the major causes of claims, and programs for improvement of patient-professional communication.

The Kansas Medical Society and its companion health professional organizations have made their earnest presentations to the special legislative interim committee, and we await the recommendations of that body. We

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Editorial COMMENT

The Hickory Stick Retuned

Progress tends to be recorded in terms not only of brilliant discoveries and achievements, but also the formal definition of some activity which has been around all the time. The mid-70s, we predict, will be noted in the medical history books as the time when postgraduate education of the physician came into being. Of course, what the compilers of history will be referring to is the establishment of formal requirements for—and recognition of—physicians' efforts to continue their education after leaving the shade of the plane tree. We take this opportunity to point out to these future historians that physicians have, to a degree unsurpassed by any other discipline, been continuing their education for these many centuries. In fact, we should think those individuals most involved, the directors of postgraduate education who have been functioning all this time, must look upon the scene with mixed feelings—uncertain whether to register joy that their efforts should now take on new dignity and popularity, or chagrin that their struggles are seemingly belittled by this demand for bigger and better and more postgraduate courses.

Before we ascend into the rarefied atmosphere of "supereducation," it might be well to consider why we're going where we're going and how it will compare with where we've been. Perhaps we are misjudging the times. Perhaps this is all due to the irresistible force of the physician's yearning for an intellectual Nirvana. We have known and admired (from too far, unfortunately) a few great intellects who thrived on the continual challenge, the unrelenting mind-expansion of deep thinking, but it is no criticism of our fellow commoners that the sustained pursuit of knowledge requires some more tangible purpose. (Having had some personal—and not totally comfortable—experience with taking up an academic schedule many—oh, very many—years after we had presumed to have left such behind, we can testify that the motivation was not so much the desire for accumulated wisdom as acquiesence to a life-long habit of eating.) Why the sudden feeling, then, that everyone should be going back to school?

There can be little doubt that one of the most potent stimuli to this educational ploy—particularly in getting it down on the record—is the current malpractice situation. Physicians are admonished to fight this hydra by protecting themselves with more certificates and diplomas testifying to their high capabilities. Whether this protection will be based on the force and weight of the documentation or a truly higher quality of patient care is not clear, particularly since it has been pointed out that a significant and growing proportion of malpractice suits is directed at the very individuals who personify the ultimate in medical education, and who, in fact, are doing the educating. Certainly the optimum in patient care is the most desired—if theoretical—benefit to be obtained, but this will be difficult to quantitate. It is not apparent that there will be a significant difference in the impact on the function of the considerable number of physicians who have already actively continued their education. On the other hand, those who have not pursued such education and are now coerced in that direction are, first, not likely to absorb much nor, second, utilize what they do absorb to their patients' advantage.

Whether or not patients realize some net benefit, it must be recognized that a major factor in the program is attracting public attention to the upgrading of the professional expertise (even though we may recognize privately, as we do above, some skepticism as to the fact of that upgrading). We question whether the public is going to pay too much attention to our efforts anyway. Can we look to the day when lawyers will refuse to accept malpractice cases knowing that the physician is defended by 427½ units of postgraduate education? Can we see the time when public comment on physicians will refer not to their reluctance to make house calls or their penchant for high fees, but rather an amused reference to their being grinds? (Is that term even in use anymore?) Will the cartoon jest at the physician's unavailability as due to his being in class rather than on the golf course? Or, perhaps, the public recognition of this compulsive scholasticism will be manifested by insurance companies competing for the favor of providing physicians with a generous assortment of liability policies inversely proportional in cost to the physician's recorded time hitting the books.

Nevertheless, this public image aspect of the continuing education concept is one of the more important ones, and the attempt should be made to offset the pessimistic implications noted above. The public must be effectively informed that the profession is expanding an activity it has been pursuing all along, that it is doing this voluntarily (well, with a little nudging), and that its hopeful purpose is patient benefit. The public is already aware of the length of the undergraduate curriculum. It must be made aware that the practice of medicine is a continual and unending learning process.

If patient benefit is doubtful and public awareness is problematic, we can still look to the element which has always been the prime motivator in education—personal satisfaction. It will be well to keep in mind this primary contribution of postgraduate education to a highly individualized profession. There are, however, a couple of aspects of the continuing education plan that are not immediately apparent but nevertheless should be productive of benefit to the profession. One relates to the ubiquitous town-gown conflict. Strangely, when these two groups get together they achieve a very satisfying rapport, but when each retires to its own domicile, they revive the old antagonisms. The academics chew up the practitioners for their stupid mistakes, and the practitioners snarl at the ivory tower kooks. Perhaps the more consistent, continuing, and generalized contact stemming from the emerging programs will help to maintain a greater attitude of mutual respect, which is not only justified but essential to the integrity of a beleaguered profession. We think, we see some basis for this hope in the fact (as we interpret it, anyway) that one of the distinct benefits of the postgraduate courses, as they have developed over the past few decades, has been the change in the presentation of material, specifically, a willingness on the part of the professor to turn off the magic lantern, come down off the podium, and talk person-to-person with the audience. Witness the popularity of the informal panel discussion, the question-and-answer session. Or the extension of the service to the potential student too distantly or inconveniently located to get to the fountainhead, as in our own circuit courses. These latter-day versions of the curbstone consultation and the dressing-room dialog must surely tell us something about the virtues of communication.

The other potential value we see in continuing education departs somewhat from the traditional purpose of the activity. Beside being a mechanism for updating the physician's professional knowledge, it can be a forum for keeping the physician adjusted to patient need, a means of conditioning medical attitudes to fit changing demands. It is a favorite medical conviction that there is nothing wrong with the way medicine is currently practiced, and that in reality this is the way patients want it. Why, then, the turmoil on the medical scene? Well, this conviction is neither entirely right nor entirely wrong. A major need and obligation of the profession at this time—and a worthy purpose of the continuing education structure—is the adaptation of the continuing and viable truths in medical practice to the changing social structure. The good of medical practice need not be destroyed—as many fear it is being—nor can the changing scene be ignored—as many feel it is. They must be merged, and it is hoped that we can look for continuing medical orientation as well as continuing medical education.—*D.E.G.*

DISPENSING OF DRUGS

According to Kansas Statutes, the three persons who can legally dispense drugs are:

1. registered pharmacist;
2. pharmacy intern;
3. licensed physician (M.D. or D.O.).

Consequently, who can dispense drugs really presents no problem, according to James E. Hill, M.D., Secretary, Kansas Board of Healing Arts. But how it is done is important. If a physician desires, or is required, to dispense drugs, then he personally must perform the act, and not relegate the packaging of medication and its labeling to a third party. Dispensing is a privilege granted by law, and in this day of frequent malpractice suits should be carried out without deviation from the law. The labeling must be adequate and readable. The Healing Arts Board, for your protection, urges you to explicitly follow the law.

President's Message

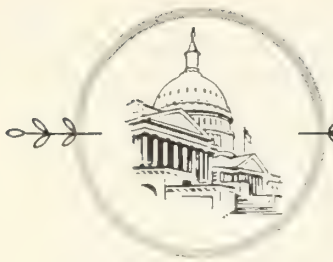
(Continued from page 279)

have good reason to believe that the committee leadership recognizes both the gravity of the situation and the fact that there is no answer to the problem in simply imposing a burden of rigid and punitive discipline on the health professions through the creation of a cumbersome bureaucratic superagency, as was embodied in some of the recommendations before the committee.

As we move toward some legislative action on this major public issue, we invite the legal community of Kansas to look again at its stated position. The Kansas Medical Society doubts that statement addresses in a positive way several key elements needed in the construction of the first steps toward solution to this complex problem.

Even if our friends in the law truly believe that the problem derives in no part from them, it should be apparent to everyone that no solution will be found without their active help and cooperation!

Fraternally,
JOHN W. TRAVIS, M.D.



Socio-
ECONOMICS

The Federal Privacy Act

Disclosure of Medical Reports in Social Security Disability Claims

The Privacy Act of 1974 (P.L. 93-579), passed by Congress in December 1974, and signed by the President on January 1, 1975, became effective on September 27, 1975. The basic purpose of the Privacy Act is to safeguard an individual's privacy by regulating the collection, maintenance, use, and dissemination of personal information by federal agencies on that individual. Among other provisions, the new law gives individuals the right to inspect records about themselves (including medical records) that are maintained by federal agencies.

Briefly, the Privacy Act requires federal agencies to:

- Collect, maintain, use, or disseminate records of identifiable personal information in a manner that assures that such action is for a necessary and lawful purpose, that the information is current and accurate for its intended use, and that adequate safeguards are provided to prevent misuse of information;
- Permit individuals to determine what records pertaining to them the agency collects, maintains, uses, or disseminates;
- Permit individuals to prevent records pertaining to them obtained for a particular purpose from being used or made available for another purpose without their consent;
- Permit individuals to gain access to information pertaining to them in federal agency records and to have a copy made of their records (including medical records).

Disclosure of Medical Records by SSA

The number of requests from individuals to inspect medical reports obtained in connection with their disability claim is expected to be relatively small. And in the great majority of requests received, the individual will already be generally aware of the information in the medical reports.

There will be a small percentage of cases in which direct access to a medical report may have an adverse effect on the individual. Procedures, therefore, call for a screening of medical reports to identify these cases. In such cases, the report will be released only to an authorized representative designated by the individual. The procedures apply to both social security and supplemental security income disability claims.

Complete and Objective Medical Reports Still the Goal

The new information disclosure provisions do not change the way physicians should complete medical reports in connection with a patient's disability claim. As always, the emphasis is on the type of objective reporting —symptoms, signs, and laboratory findings relating to the patient's condition—that is required for impartial disability determinations under both programs.

For further information about the disclosure of social security medical records under the Privacy Act, get in touch with this office by writing: Disability Determinations Services, P. O. Box 5057, Topeka, KS 66605, or by calling toll free 1-800-432-2428, or by contacting any social security office.

A Health Care Consumer Report

LUCY CAMPBELL,* ***Humboldt***

(Editor's Note: A significant feature of the health care scene today is the increasing insistence on the part of the public to be a party to the planning and implementation of health services. Physicians in general, we believe, because they are oriented to the individual patient level of care, look askance at such a trend because they visualize the interference with their primary function by persons who are neither adequately trained nor professionally qualified to justify an advisory role in the process. The following report has been submitted to the JOURNAL and is published because we believe it presents the "consumer" in a different —and healthier—aspect—a concerned individual who has independently and rationally sought education regarding medical matters and seeks to utilize the strength of a private citizen in objective and responsible influence upon those professionally and governmentally involved.)

> "Consumerism is the effort to equalize the rights, access to information and power of the buyer with those of the seller."

TWO FACTS must be considered before appointing any citizen to consumer positions on the Health Service Agency Governing Board:

1. The consumer must be willing to dedicate the time to study extensively, to seek information concerning the practice of medicine, and to continually contact citizens for feedback concerning health planning procedures. Otherwise, the consumers will receive only the views of board members with vested interests to protect.

2. Women who have reared families and are now seeking ways to share years of experience with society should be seriously considered for Board appointments. Caring for children, husbands, parents gives women a wealth of experience with doctors, hospitals, nursing homes. Women are the most underused resource in the nation.

I object strongly to Paragraph A, under Advantages, in the transition plan prepared by Secretary of Health and Environment Dwight Metzler. It reads:

> Maximize the participation of persons (providers, consumers, elected officials) that have gained several years of health planning experience in areawide Health Planning Councils.

Regional councils, with the possible exception of the two federally-funded councils, have had trouble getting consumers to attend meetings, much less participate for several years. This statement, and others in the transition plan, indicate an exclusion of any citizens who might be interested in participating in health planning, as members of the policy-making body.

Rapidly changing life styles and a multitude of social problems dictate a changing role for the physician and a need for innovative health planning, but we must guard against jeopardizing what is good while we work to make the health care system better.

The medical profession is in genuine peril, and all Americans are going to suffer if our doctors are strangled in red tape and bureaucratic nonsense. What is at stake in restructuring the health care delivery system by federal law and state implementation is the effect on the motivation and conscience of the physician in his relationship with his patient.

No group of citizens in the nation have carried out their responsibilities to the public as well as the medical profession. While I am not uncritical of some aspects of the practice of medicine, I refuse to stand by and see a fine profession dragged down to a level which will be detrimental to all of us.

I reject completely the idea of indentured servitude for medical students. Over one-third of the cost of educating every student attending a public university is paid by the taxpayer. Why should we single out medical students to repay costs of education? The best thing we could do is take both romance and politics out of the practice of medicine.

The role of the physician must be clearly defined in relation to the complex health care system which involves allied health professionals, public health professionals, preventive medicine, innovative ideas concerning the delivery of health care. We would do well to remember: People are taken to health care or health care is brought to people. The development of an energy policy will have an important impact on plans for the delivery of health care which dictates avoiding locking the state into a premature structure which won't work. Adequate education of the public concerning the complexities of planning for a viable health care delivery system is fundamental to formulation of a Kansas Health Plan.

Suggestions to dramatize need for health planning are:

1. Cooperative effort on the part of medical profession, health planning councils, medical schools to plan

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* This report was prepared at the author's expense, and submitted to Governor Robert F. Bennett.

information programs which would make constructive use of the public's fascination with the world of medicine.

2. Consideration of planning health fairs in each Health Service Area as a bicentennial project. I noticed in the newspaper that Dr. Howard G. Wilcox is teaching a special bicentennial course on the nation's medicine, including presidential medicine, next year in Salt Lake City. This is only one example of how public attention can be focused on health needs.

3. Encourage the University of Mid-America to offer a course on health planning to encourage public understanding of the complexities involved.

4. Encourage educational institutions to offer consumer education programs relating to the health care delivery system. For example, WSU's Tel-Med program is an excellent source for consumer information, which could be expanded to serve the whole state.

If the public is to accept health planning to any great degree, we must break out of the trap of traditional planning which is based on the idea that people are dumb and passive. There must be constant contact with people to avoid "blueprint" planning, and to prevent the chaos which too often has followed passage of federal laws from blanketing our health care delivery system with yet another layer of bureaucratic mindlessness.

Acknowledgments

All of the work necessary to compile this report was accomplished at the expense of the author, both of time and money, to illustrate the complexity of the consumer position on the Health Service Agency Governing Board. Appreciation is herewith expressed to each person who gave their time to ensure the citizen's right to information.

Journal on Microfilm

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IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or Narcan® (naloxone HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage. Use with care in patients with acute ulcerative colitis and discontinue use if abdominal distention or other symptoms develop.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

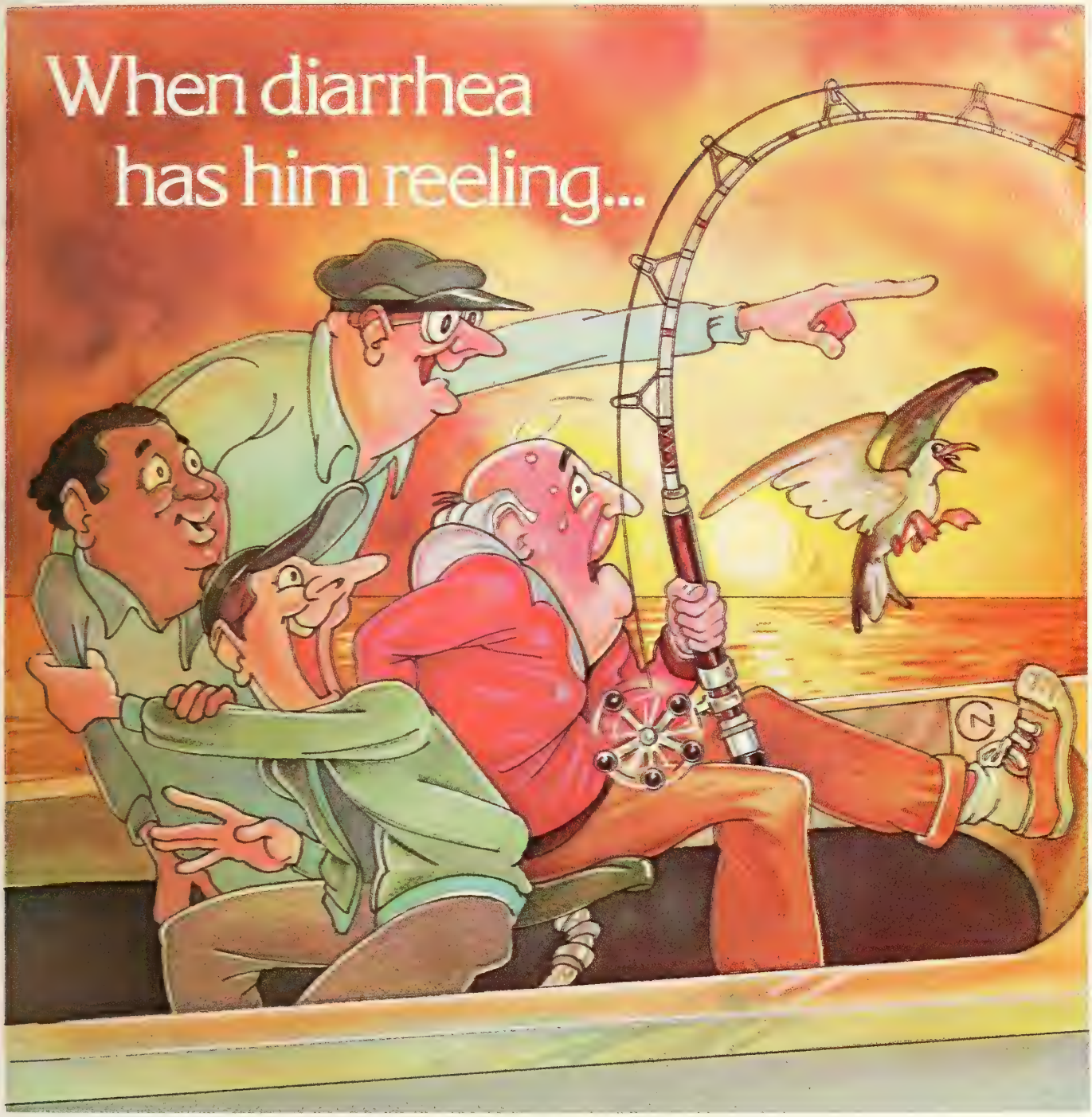
Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, hyperthermia, tachycardia, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. A narcotic antagonist may be used in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

455



Diarrhea can hook anyone. When it does, physicians and patients both want prompt control of diarrheal symptoms. Lomotil will usually control diarrhea promptly.

This rapid action can halt the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate specific therapy should be given along with Lomotil.

Lomotil is contraindicated in children less than 2 years old.

Lomotil®

TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain: diphenoxylate hydrochloride 2.5 mg. (Warning: May be habit forming), atropine sulfate 0.025 mg.

holds the line.

In hypertension,
ALDOMET® (METHYLDOPA|MSD)
usually offers more than effective lowering of blood pressure...

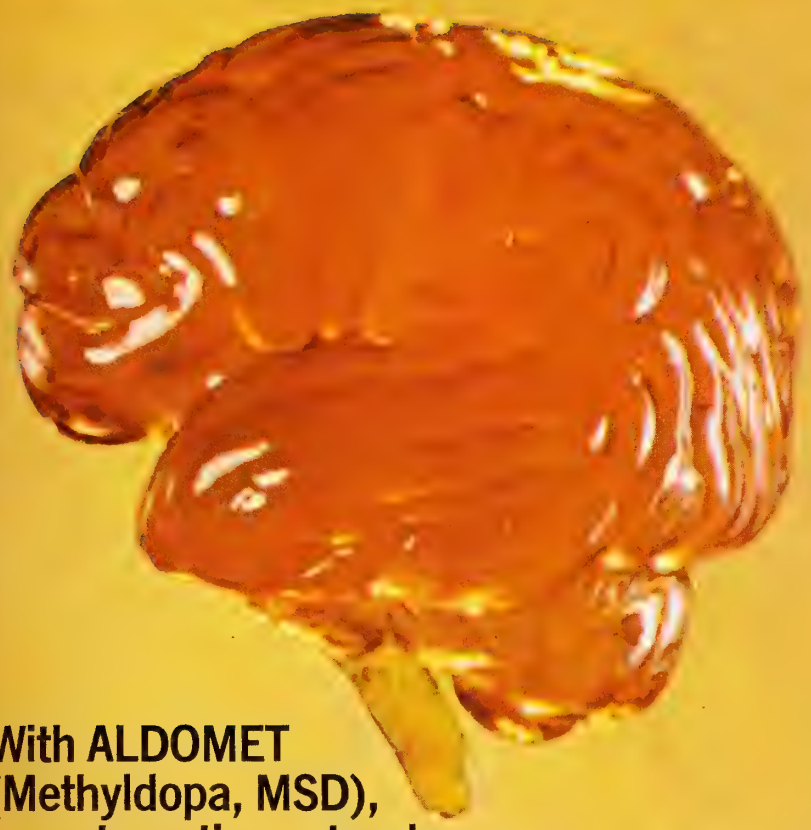


With ALDOMET (Methyldopa, MSD), existing renal function is usually unchanged

ALDOMET has no direct effect on renal function. When used in effective doses, ALDOMET usually does not reduce glomerular filtration rate, renal blood flow, or filtration fraction.

With ALDOMET (Methyldopa, MSD), cardiac output is generally unchanged

ALDOMET has no direct effect on cardiac function. When ALDOMET is used in effective doses cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is slowed.



With ALDOMET (Methyldopa, MSD), symptomatic postural hypotension is infrequent

ALDOMET reduces both supine and standing blood pressure. Less frequent symptomatic postural hypotension is experienced with ALDOMET than with many other antihypertensive agents. Exercise hypotension and diurnal blood pressure variations rarely occur.

for hypertension

TABLETS, 250 mg, 500 mg, and 125 mg

ALDOMET®

(METHYLDOPA|MSD)

a unique antihypertensive agent

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders. It is not recommended in pheochromocytoma.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

MSD
MERCK SHARP & DOHME

For a brief summary of prescribing information, please see following page.

addendum

MSD
MERCK SHARP & DOHME

to further simplify therapy for many patients

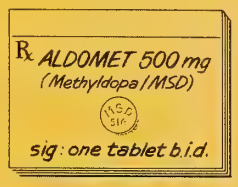
now available ALDOMET® 500 mg (METHYLDOPA|MSD)

- **often more practical to prescribe**
- **easier for patients to remember**

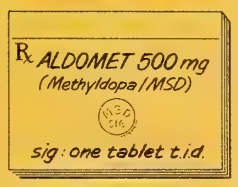
Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day.

Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

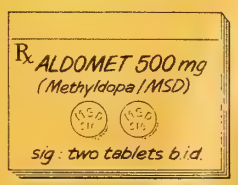
1.0-g daily dose =

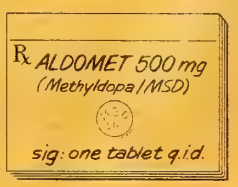


1.5-g daily dose =



2.0-g daily dose =



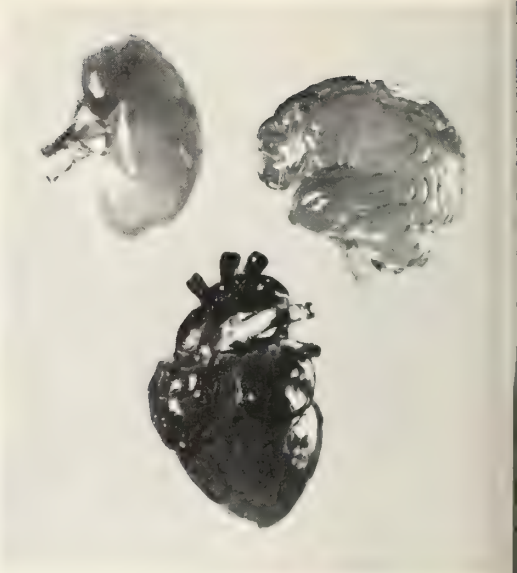


NOTE: Tablets shown are not actual size.

in hypertension

ALDOMET® (METHYLDOPA|MSD)

usually lowers blood pressure effectively



Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy.

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, decreased mental acuity, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, myocarditis

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, dermatologic reactions including eczema and lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

□ Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
□ Can relieve nausea and vomiting often associated with vertigo.*
□ Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
□ Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
□ Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

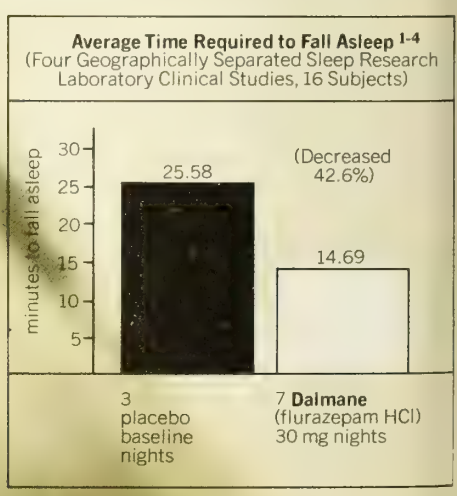
Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*



How do you handle trouble falling asleep?

With Dalmane® (flurazepam HCl), results are highly predictable.

As demonstrated below, Dalmane induces sleep within 17 minutes, on average:[1-4]



And for those with trouble staying asleep or sleeping long enough...

...sleep research laboratory clinical studies prove: Dalmane decreases number of nighttime awakenings and increases total sleep time.[5]

Dalmane (flurazepam HCl) is relatively safe, seldom causes morning "hang-over"

Dalmane is generally well tolerated. The usual adult dose of 30 mg should initially be lowered to 15 mg for the elderly and debilitated, to help preclude oversedation, dizziness or ataxia. Appraisal of possible risks is suggested before prescribing.

REFERENCES:

1. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
2. Frost JD Jr: A system for automatically analyzing sleep. Scientific exhibit at the 24th annual Clinical Convention of the American Medical Association, Boston, Nov 29-Dec 2, 1970; and at the 42nd annual scientific meeting of the Aerospace Medical Association, Houston, Apr 26-29, 1971
3. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
5. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

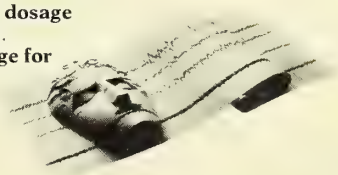
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

You can depend on the efficacy of

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.*— usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.



for insomnia

Objectively proved in the sleep research laboratory:
- **sleep within 17 minutes, on average**
- **sleep with fewer nighttime awakenings**
- **sleep for 7 to 8 hours, on average, with a single *h.s.* dose**

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association



I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
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The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).



INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

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BOOKSHELF

Books acknowledged in this section are available on loan from the Health Sciences Library, c/o Stormont-Vail Hospital, 10th & Washburn, Topeka, Kansas 66606.

HEAD NURSE, by Barbara Villet. Doubleday & Co., Inc. 1975. 201 pages. $7.95.

KEEPING FOOD SAFE, by Hassell Bradley and Carole Sunberg. Doubleday & Co., Inc. 1975. 266 pages. $7.95.

IS IT WELL WITH THE CHILD? By Susan Strauss. Doubleday & Co., Inc. 1975. 152 pages. $7.95.

PRACTICAL PSYCHIATRY FOR THE PRIMARY PHYSICIAN, by James R. Hodge, M.D. Nelson-Hall Publishers. 1975. 357 pages. $15.00

HEADACHES, by Arthur S. Freese, D.D.S. Doubleday & Co., Inc. 1973. 182 pages. $6.95.

WE MAINLINE DREAMS: The Odyssey House Story, by Judianne Densen-Gerber, J.D., M.D. Doubleday & Co., Inc. 1973. 421 pages illustrated. $9.95.

REVIEW OF PHYSIOLOGICAL CHEMISTRY, 15th Ed. Harold A. Harper, Ph.D., Editor. Lange Medical Publications. 1975.

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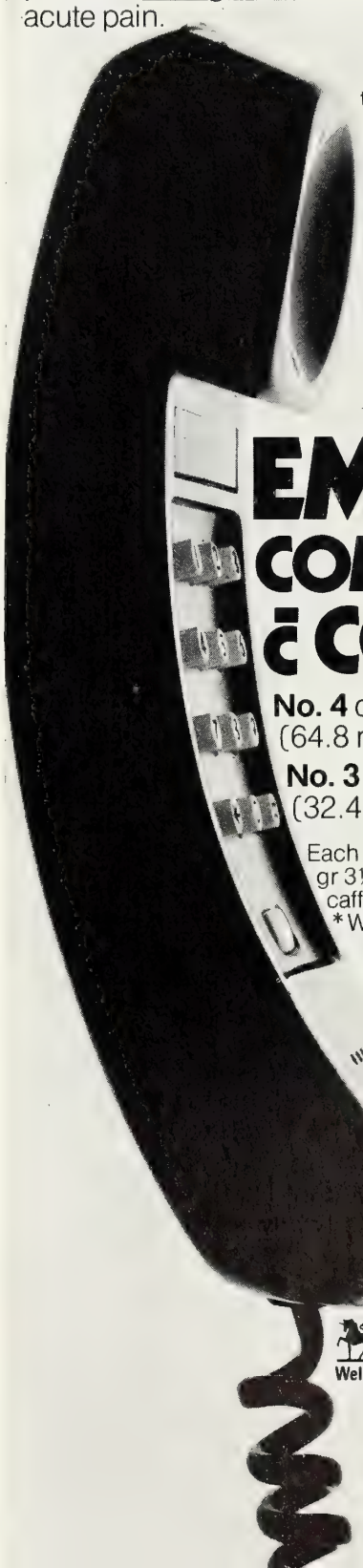


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*Warning—may be habit-forming.

Ⓒ III

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Open Letter to the Doctors of Kansas

Dear Doctor,

You are aware of the value of good public relations in the community, and I think the International Health Activities Committee in our Auxiliary is just one of the successful ways of promoting it. Our state chairman has generated much enthusiasm and participation in many of its activities, not only among doctors' wives, but within various communities involving all ages. Many of the activities require little or no expenditure of money, but the utilization of time and energy is heavy. There is the Walk for Mankind, the packing of barrels, and other activities which require help from men. Children can put together a hygiene kit suitable for other children in need. The ladies make johnny coats from your discarded shirts, which are then used by natives in various foreign locations. Our ladies, and those in various clubs and church groups, have made items such as baby quilts, leper bandages, bootees, dolls, jump ropes, mats, exercise balls, and many other items. Most of these items can be made from scraps of yarn, cut-up bread wrappers, and other discarded materials. This is ecologically good, and brings real satisfaction to those who make them. This activity is quite suitable for the senior citizen, and there is no expense involved.

At our recent State Fall Conference Idea Exchange, one county International Health Chairman contributed an idea that could be used in the waiting room of your office for a short time each year. She used a Christmas tree and tied a sample of these items on it with an explanation of how they were made and where they are needed. A placard was placed near the tree explaining how anyone can participate in this project. This could be a subtle invitation for the people of your community to join in the endeavor. It would only involve some time and effort, and they would have the satisfaction of participating in something worthwhile. It would also help them understand that the doctor and his wife care about those less fortunate, and are doing something about it.

I wanted to share this project with you, in case you are approached to furnish a small spot in your waiting room for a short while. I wish to say now, "Thank you, Doctor," for I feel sure you will cooperate with us in this endeavor.

At our recent State Fall Conference, we included in our program a panel discussion on professional liability. We appreciate the fine help on the panel of Drs. Loeffler and Yoder, and Jerry Slaughter of the Kansas Medical Society. Our regional chairmen, with the help and guidance of our state chairman on professional liability, have sent out letters of information and instruction to county presidents for them to instruct their members, and to challenge them to become active participants in informing their friends and neighbors about professional liability. We published a summary of the basic proposals included in the Kansas Medical Society's comprehensive remedial legislative program for professional liability in the latest issue of the *Kansas Doctor's Wife.*

If you have any suggestions for other things we should be doing, please feel free to suggest them to us, so we can implement them.

Sincerely,
Anita Yoder
President,
Woman's Auxiliary to the
Kansas Medical Society





Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed. "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

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Each capsule contains:
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If it doesn't work in a week, forget it.



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Ragan, C. The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Fire fighter for arthritic flare-ups.

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.
Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.
Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias, renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.
Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.
Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.
Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.
(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information

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FOR LONG-TERM CONTROL OF HYPERTENSION*

Serum K^+ and BUN should be checked periodically. (See Warnings Section.)



Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* **Warning**
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

***Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

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Monday-Wednesday, Dec. 1-3/7:30-9:00 AM (4½ hour, 3-day course: $45)
1. Dermatology for Non-Dermatologists
2. Evaluation of the Unconscious Patient
3. Hyperlipidemia
4. Infectious Diseases in Children
5. Management of Adolescent Problems
6. Newer Antibiotics
7. Newer Concepts of Family Planning
8. Office Management of Sexual Difficulties
9. Peripheral Vascular Disease—Diagnosis and Treatment
10. Pulmonary Function Tests and Blood Gases

Monday-Wednesday, Dec. 1-3 (Numbers 1-10)
1st Choice #____; 2nd Choice #____; 3rd Choice #____

Monday-Wednesday, Dec. 1-3/10:30 AM-Noon (4½ hour, 3-day course: $45)
11. Acid-Base, Fluid and Electrolyte Balance
12. Advanced Electrocardiography
13. Critical Patients—Critical Decisions
14. Normal and Abnormal Uterine Bleeding
15. Office Management of Anorectal Disorders
16. Office Practice of Gynecology
17. Physicians' Marriages
18. Special Problems of Child Abuse
19. Surgical Lesions of the Intestines—Diagnosis and Treatment
20. Treatment of Common Pediatric Allergies

Monday-Wednesday, Dec. 1-3 (Numbers 11-20)
1st Choice #____; 2nd Choice #____; 3rd Choice #____

Thursday-Friday, Dec. 4-5/7:30-10:30 AM (6 hours for total course; 3 hours on Thursday, 3 hours on Friday:$60)
21. Acid-Base, Fluid and Electrolyte Balance (repeat)
22. Basic Electrocardiography
23. Birth Defects and Clinical Genetics
24. Dermatology for Non-Dermatologists (repeat)
25. Fetal Monitoring
26. Ophthalmoscopy for the Non-Ophthalmologist
27. Pediatric Cardiology
28. Pitfalls of Emergency Room X-Rays
29. Office Endocrinology
30. Immunology—1976
31. The Uterine Pap Smear

Thursday-Friday, Dec. 4-5 (Numbers 21-31)
1st Choice #____; 2nd Choice #____; 3rd Choice #____

Offered Both Monday & Tuesday, Dec. 1 & 2/7:30 AM-Noon (4½-hour course: $45)
32. Basic Life Support—Cardiopulmonary Resuscitation (Dec. 1) _____
33. Basic Life Support—Cardiopulmonary Resuscitation (Dec. 2) _____

Wednesday-Friday, Dec. 3-5/9:00 AM-Noon (9-hour course: $90)
34. Advanced Life Support—Cardiopulmonary Resuscitation. (Prerequisite: Basic Life Support Course) (Dec. 3-5) _____

Courses of the AMA Committee on the Medical Aspects of Sports (Each a 3-hour course: $30)
Monday, Dec. 1/7:30-9:00 AM & 10:30-Noon
35. The Physical Exam _____

Tuesday, Dec. 2/7:30-9:00 AM & 10:30-Noon
36. The Oriental Arts (Karate, Judo, Yoga) _____

Wednesday, Dec. 3/7:30-9:00 AM & 10:30-Noon
37. Emergency Care on the Field _____

Thursday, Dec. 4/7:30-10:30 AM
38. Wrestling _____
39. Aquatic Sports _____

Friday, Dec. 5/7:30-10:30 AM
40. Rehabilitation _____

Tuesday-Wednesday, Dec. 2-3/7:30-10:30 AM (6 hours for total course; 3 hours on Tuesday, 3 hours on Wednesday: $60)
41. Writing for Scientific Journals _____

LUNCHEON ROUND TABLES
(Held in Hilton Hawaiian Village Long House Room, luncheon round tables are jointly sponsored by the AMA Auxiliary and AMA Council on Scientific Assembly. Cost: $10.00 each.)
Tuesday, December 2 (12:15-1:45 PM) • Topic—Ancient Polynesian Medicine _____
Thursday, December 4 (12:15-1:45 PM) • Topic—Delhi Belly, Gyppy-Tummy, and Other Diseases of Travelers _____

General Registration

_____ Non-member physicians: $35
_____ Guests of non-members: $10
_____ Foreign M.D.'s: no fee
_____ AMA members and their guests: no fee
_____ Medical students, interns and residents: no fee

My remittance of $_____ is enclosed. Make check or money order payable to the American Medical Association. Payment must accompany registration.

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Update: October 2, 1975 Board of Directors Meeting

In the September issue of the JOURNAL, we spoke of our efforts to negotiate with the Bureau of Quality Assurance (BQA) on two of the changes they had recommended for our Bylaws, as follows:

1. BQA recommended that we reduce the size of our Board of Directors from 31 to 21 or less. After negotiating with BQA, it was mutually decided to leave the size of our Board at 31.
2. BQA recommended that our Bylaws be changed to say that the Board may terminate a physician's membership in the PSRO only for failure to perform professional activities in the area, or for loss of license to practice. At the October 2, 1975, meeting of the Board of Directors, a resolution was passed to amend the KFMC Bylaws to comply with this recommendation. In our negotiations with BQA, we were advised that it is outside the authority of a PSRO to discipline, censure, suspend, or expel members for any reason other than failure to perform professional activities in an area, or loss of license to practice. Issues such as conduct, ethics, etc. come under the purview of the Kansas Medical Society or the Kansas State Board of Healing Arts.

Also approved at this meeting was the signing of an interim contract with BQA. This contract is to run until March 31, 1976, and is a post-planning, pre-conditional phase of our PSRO effort. The negotiations with BQA on this contract almost reached an impasse; but the diligent efforts of Drs. Francis Collins and John Travis proved to be instrumental in the resulting mutually acceptable contract.

Other subjects discussed at the meeting were alternative methods of funding for the KFMC, cost containment versus quality review, and the possibility of initiating a newsletter to the membership.

A copy of the minutes of the October 2 meeting is available on request from: KFMC, 1300 Topeka Avenue, Topeka 66612.

The article entitled "Monitoring Your Patient Care," published in the September 25, 1975, issue of *Medical Economics,* is recommended for your reading. It represents a concise look at the PSRO program, and how it will affect you in your practice.—*J.E.A.*

MANUSCRIPT AWARD FOR 1976

The Obstetrics and Gynecology Specialty Group of the International College of Surgeons is pleased to announce its Biennial Manuscript Competition. This award is an invitation to the winning author to present his paper at our International Biennial Congress in Athens, Greece, May 23-27, 1976. Round trip air fare, hotel expenses, and $10.00 diem will be provided.

Fellows of the International College of Surgeons are not eligible. Contestants must be interns, residents, or graduate students in the field of obstetrics or gynecology. Contestants must hold the degree of Doctor of Medicine from an accredited college of medicine. Eligibility extends through two years after completion of training.

The purpose of this contest is to advance the art and science of obstetrics and gynecology in accordance with the principles of the International College of Surgeons, and with the primary aim of the College, to extend the frontiers and elevate the standards of all branches of surgery.

Manuscripts are to represent only original work by the author without co-authorship, and are not to exceed 5,000 words. The deadline for submission is February 1, 1976 (mail to: Eduart Eichner, M.D., 5 Severance Circle Drive, Cleveland 44118).

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The JOURNAL of the KANSAS MEDICAL SOCIETY

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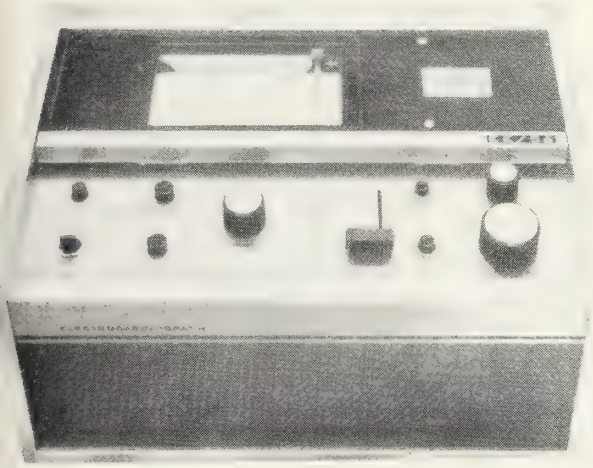
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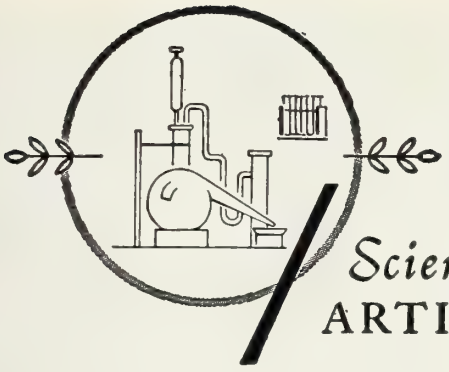


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Idiopathic Adolescent Scoliosis

Rationale and Techniques of Early Detection

MARC A. ASHER, M.D., FEDERICO ADLER, M.D. ***and***
RAE R. JACOBS, M.D., ***Kansas City, Kansas***

Scoliosis is a lateral rotation deformity of the spine; it has been observed for centuries. There are many disease processes that may predispose a patient to this deformity. However, by far the most common type of scoliosis is idiopathic adolescent scoliosis. If detected early, most cases can be managed with a Milwaukee brace-exercise program, and surgery avoided. The purpose of this paper is to outline the rationale and techniques of early detection.

Rationale

The exact incidence of scoliosis is not known and has been variously reported at 0.4 to 11 per cent, depending on the population screened and the criteria applied.[1-4] It is approximately five times more common in girls than boys. In spite of this relative frequency and potentially devastating consequences if untreated, idiopathic scoliosis often is overlooked in the early stages because the onset is insidious, the patient is otherwise well, and pain is almost always a late symptom. Also, adolescence (defined here as from age ten until adulthood) is a developmental stage of relative personal privacy. For these reasons, neither the patient nor the parents are in an ideal position to make an early diagnosis. If left to chance, the diagnosis may be stumbled upon by peers in the swimming season, by a physical education teacher in physical education classes, or at a time of clothes fitting. Chance detection usually occurs too late to allow optimal treatment.

If untreated, idiopathic adolescent scoliosis often will progress to the point of causing crippling symptoms.[5] The most dangerous of these is restricted pulmonary function as evidenced by decreased vital capacity. Patients who have a 60-degree or more thoracic curvature at the end of growth face an increase in mortality in their later years.[6] Furthermore, the degree of cardiorespiratory embarrassment is directly related to the degree of curvature. Thoracic curves of 60 degrees or more at the end of growth have been shown to increase an average of 28 degrees during the ensuing two decades.[7] In addition, untreated patients with lumbar curves probably are prone to increased back pain in later years.

The rationale and techniques of early detection of the most common type of scoliosis are outlined.

Idiopathic scoliosis appears to be inherited as a sex-linked dominant trait with variable expressivity and incomplete penetrance in about 80 per cent of cases detected. The remaining 20 per cent represents sporadic

From the Section of Orthopedic Surgery, K.U.M.C., Kansas City, Kansas 66103.

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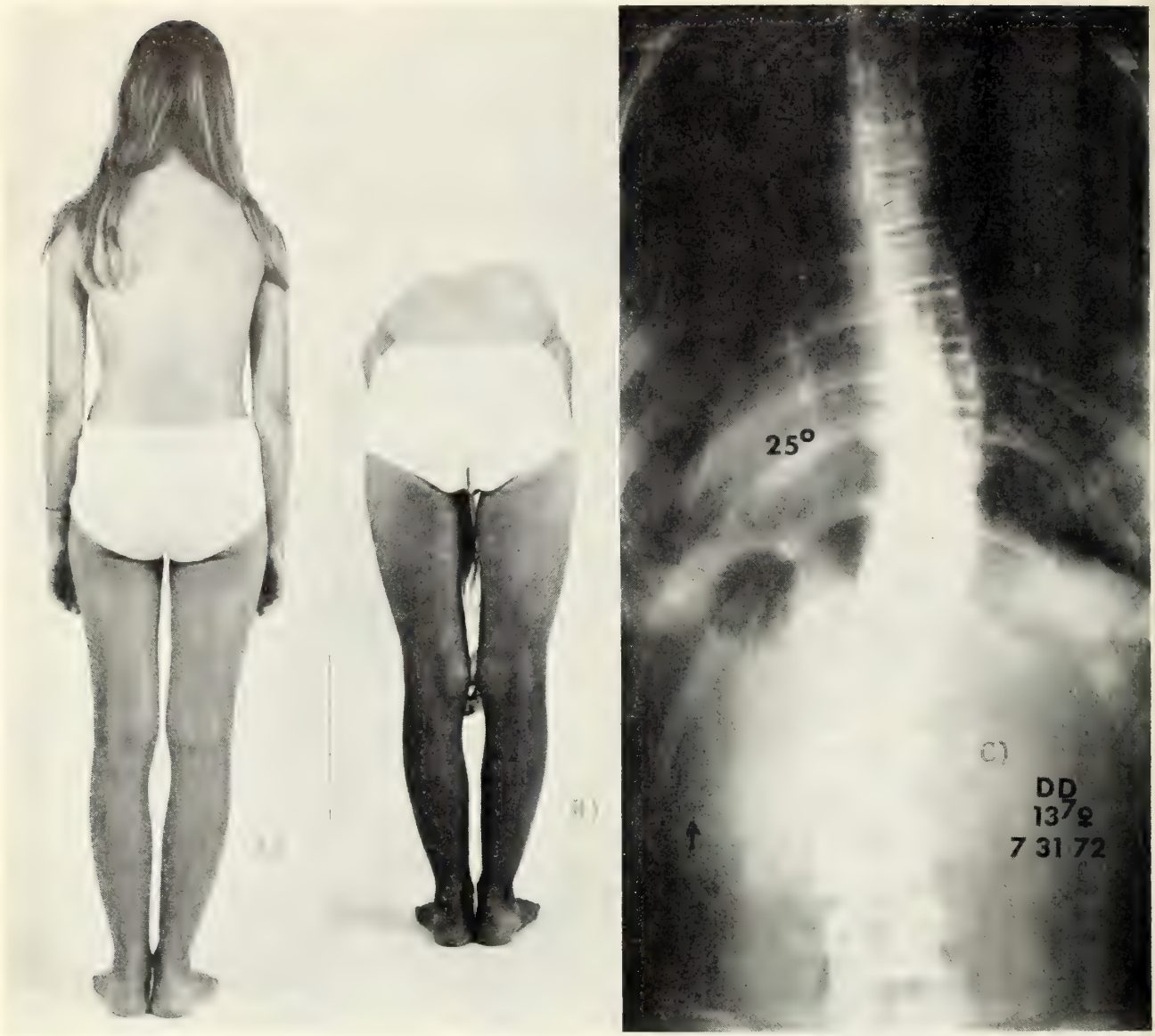


Figure 1. A) Photograph of a 12-year, 5-month-old girl with little to suggest spine curvature. B) Forward-bending photo of the same patient demonstrating a right thoracic hump. C) Standing x-ray of the same patient revealing a 25-degree right thoracic curve.

cases.[8] Subsequent siblings of an affected child with normal parents have a 2-per cent chance for boys and a 7-per cent chance for girls, of developing scoliosis; if either parent also has scoliosis, the risk to a subsequent brother is 7 per cent, and to a subsequent sister, 42 per cent.[9] Therefore, when the diagnosis of idiopathic scoliosis is established, it is especially important to examine other members of the family.

Screening Examination

Rapid screening can be accomplished easily in about 30 seconds. School nurses and physical education instructors are in an ideal situation to do this. The age group that should be screened is from 10 through 13 years.

The adolescent to be examined should be unclothed except for shorts (girls being examined in the locker room), and should be observed in three standing positions. In the posterior upright position, the patient is observed for shoulder elevation, scapular prominence, hip prominence, asymmetrical arm-body distance, pelvic asymmetry, and balance as determined by a plumb-line dropped from the occiput. Curves less than 25 degrees may not be visible in this position. Next, the patient should be bent forward 90 degrees and allow the head and hands to hang freely and evenly. To assure

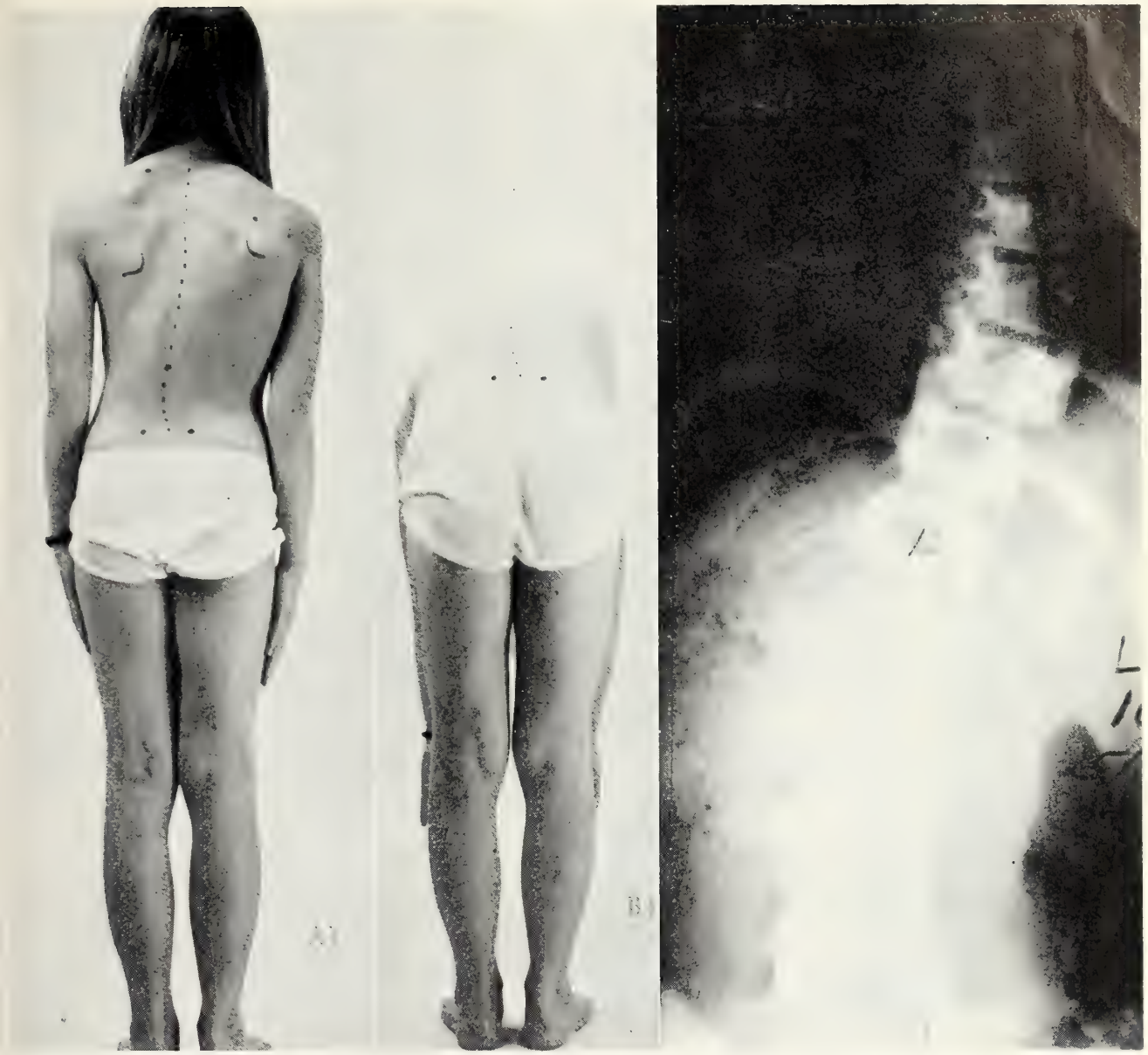


Figure 2. A) Photograph of a 10-year, 8-month-old girl demonstrating asymmetrical scapulae, asymmetrical arm-body distance, and trunk shift to the right. B) Forward-bending photograph of the same patient demonstrating a marked right thoracic hump. C) Standing x-ray of the same patient revealing a 40-degree right thoracic curvature.

the latter, the hands may be pressed together in the prayer position. The adolescent is observed either posteriorly or anteriorly for rib hump or lumbar hump, *i.e.,* asymmetry of the rib cage in the thoracic spine and the paraspinal musculature in the lumbar spine. Even small curves of 5-8 degrees are detectable by this examination.[10] Finally, the patient is viewed from the side, standing upright, to screen for the related spinal deformities of excessive thoracic kyphosis (round shoulders) or excessive lumbar lordosis (sway back).

Normal images in these three positions can be established easily in the examiner's mind by viewing a few normal children.

If any hint of lateral curvature is detected, it should be recommended to the parents that the child be examined by the family physician. It is recommended that this examination include a standing 14 x 17-inch AP x-ray of the spine. Curves are measured by the Cobb technique. If the examiner is not comfortable with the measurement technique, mail consultation may be adequate.

Patients with curves less than 15-20 degrees should be alerted to the possibility of progression. Parents may be taught to examine the patient in the forward-bending position at three-month intervals and return if they suspect progression. If the curvature is greater than



Figure 2. F) Standing and G) forward-bending photograph of the same patient after 18 months of Milwaukee brace treatment, demonstrating correction of her lateral shift and marked improvement in her thoracic hump. H) Standing x-ray of the same patient in her Milwaukee brace after 18 months of treatment.

15-20 degrees, consultation with an orthopedic surgeon is recommended.

If the thoracic kyphosis or lumbar lordosis is increased, then a standing 14 x 17-inch lateral x-ray of the thoracic or lumbar spine should be obtained. If there appears to be excessive kyphosis or lordosis, consultation is also recommended.

Illustrative Cases

There are five curve patterns commonly seen in idiopathic adolescent scoliosis. The most common is the right thoracic curvature. The 12-year, 5-month-old girl in *Figure 1A* appears normal when viewed from the back in a standing position. However, with forward flexion, as seen in *Figure 1B,* a prominence of the rib cage on the right side is clearly evident. A standing 14 x 17-inch x-ray, as seen in *Figure 1C,* demonstrates a 25-degree right thoracic curvature from T6 to T12. This patient is an ideal candidate for Milwauee brace-exercise treatment. As an alternative to the posterior forward-flexed position, the patient may be viewed from the front in the forward-flexed position and this may at times uncover curves of even smaller degree.

The 10-year, 8-month-old girl in *Figure 2A,* is off-balance to the right, has a prominent right scapula, a prominent left iliac crest, and has asymmetrical arm-

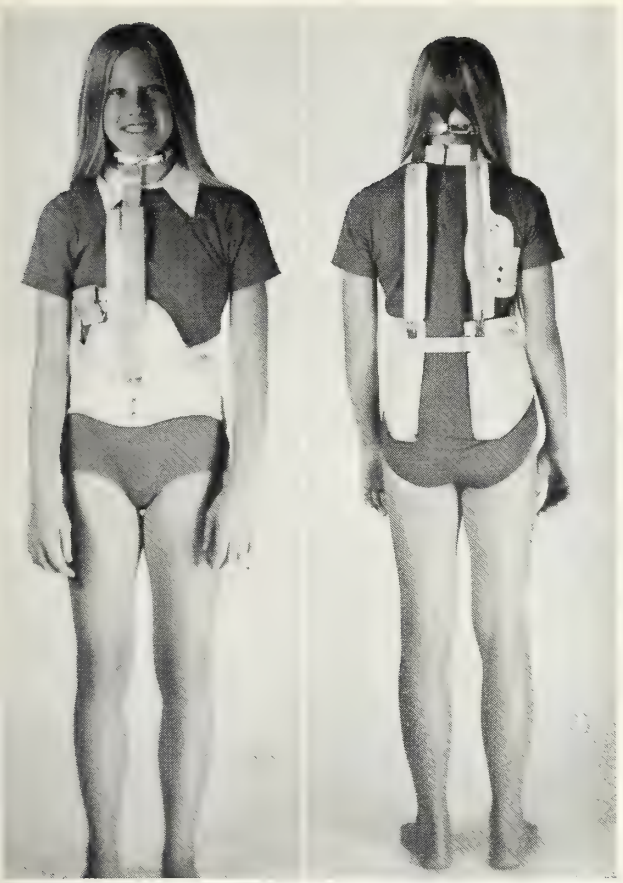


Figure 2. D) and E) Photographs of the same patient in her Milwaukee brace.

body distance. On forward bend *(Figure 2B),* the prominence of the right thoracic rib cage is quite apparent. A standing 14 x 17-inch AP x-ray of the spine revealed a 40-degree right thoracic curvature from T5 to T12 *(Figure 2C).* After 18 months in a Milwaukee brace *(Figures 2D and 2E)* she was in balance, and the right shoulder and the left iliac crest were less prominent *(Figure 2F).* On forward-bending *(Figure 2G)* the right thoracic rib hump has been markedly diminished. A standing 14 x 17-inch AP x-ray in the Milwaukee brace reveals a 5-degree curve *(Figure 2H).*

A second type of curve pattern is the right thoracolumbar where the apex of the curve is at the lower thoracic spine level and the lower end of the curvature is at L2 or below. Clinically, these patients look similar to the patient just seen above, but usually with more exaggerated findings.

A third type of curve is the double-structural curve, usually a right thoracic-left lumbar curve. The 11-year, 5-month-old girl in *Figure 3A,* has level shoulders, level pelvis, and is in balance when viewed in the posterior upright position. She does have arm-body distance asymmetry but could be passed for normal if viewed only in this position. However, with forward flexion, prominence of the right thoracic rib cage is apparent *(Figure 3B).* A standing 14 x 17-inch x-ray reveals a right thoracic curve of 58 degrees from T5 to T11, and a left lumbar curve of 60 degrees from T11 to L3 *(Figure 3C).* These curves are too severe for treatment with a Milwaukee brace-exercise program and surgery subsequently has been performed.

A fourth curve pattern is the left thoracolumbar curve. The 12-year, 6-month-old girl in *Figure 4A,* appears slightly off-balance to the left, and while her shoulders and scapulae are level, her left flank is full and her right flank unduly indented. With forward flexion *(Figure 4B)* a left paravertebral lumbar prominence is apparent. A 14 x 17-inch x-ray *(Figure 4C)* reveals a 40-degree left thoracolumbar curve extending from T9 to L3. With thoracolumbar and lumbar curves, it is especially important to look for associated anomalies of the lumbosacral spine. This patient had an associated Grade I spondylolisthesis *(Figure 4D).*

A fifth curve pattern is a triple-structural curve, usually consisting of a high-left thoracic, right thoracic, and left lumbar curve pattern. The examination techniques described would detect such a patient.

The related spine deformities of increased thoracic kyphosis and lumbar lordosis are illustrated in *Figures 5A* and *5B.*

Treatment Recommendations

There are three basic treatment categories available: (1) enlightened periodic observation; (2) a combined Milwaukee brace-exercise program; and (3) surgery.

For decades, there has been a continuing parade of new braces, but to date, only the Milwauee brace has stood the test of long-term followup. Exercises alone are not adequate treatment for scoliosis and will not prevent progression. Electrical spinal stimulation[11] is in the earliest stage of clinical trial. Manipulation is not helpful.

Treatment selection depends upon the patient's age, the severity of the curve, and the curve pattern. To determine whether or not the child is still growing, one may rely upon a number of factors including the history of the onset of menses, there generally being three years of growth remaining after this. The skeletal age as determined by a wrist x-ray (skeletal growth usually being complete in a girl at age 15 years, 6 months, and in a boy at age 16 years, 6 months), and excursion of the iliac epiphyses (with skeletal growth being complete once the epiphysis has capped).



Figure 3. A) Photograph of an 11-year, 5-month-old girl with arm-body distance asymmetry who could pass for normal if viewed only in this position. B) Forward-bending photograph of the same patient revealing a right thoracic rib hump. C) Standing x-ray of the same patient showing a 58-degree right thoracic and a 60-degree left lumbar curvature.

In the growing child, curves less than 20 degrees may be treated by periodic observation, with any evidence of progression being the indication to initiate brace treatment. In the growing child with curves between 20 and 40 degrees, a well-administered Milwaukee brace-exercise program should be effective in preventing further progression of the curvature in nearly all cases.[12] In some cases, the degree of curvature can be permanently diminished, but total correction is not to be anticipated. In the growing child with curves of 55 degrees or more, surgical correction and fusion is indicated. Approximately a 50-per cent correction usually is obtained. This leaves a gray-zone category in the growing child with a curve from 40 to 55 degrees, in which many factors must be taken into consideration before a final decision is made. These factors include age, sex, body habitus, appearance, curve etiology, curve pattern, pulmonary function, and patient and family preferences.

After completion of growth, curvatures of 40 degrees or less usually will not progress, and periodic observation alone is indicated for the larger curves in this category. An occasional curve in this category will progress and surgical correction and fusion then may be performed. In the adolescent whose growth is complete, curves of 55 degrees and more usually should be surgically corrected and fused, leaving a gray zone between 40 and 55 degrees where, again, the multiple factors enumerated above have to be taken into consideration. For instance, it is currently believed that double-structural curves of up to 55 degrees are acceptable for periodic observation, whereas lumbar curves beyond 40 degrees should be corrected and fused. These criteria are under constant scrutiny and revision as long-term data become available.

A program of Milwauee brace-exercise treatment is demanding and requires the combined skills of an interested orthopedic surgeon, orthotist, physical therapist, and nurse. For details of this treatment program, the reader is referred to the writings of Dr. Walter P. Blount.[13]

Because the treatment usually encompasses the sensi-

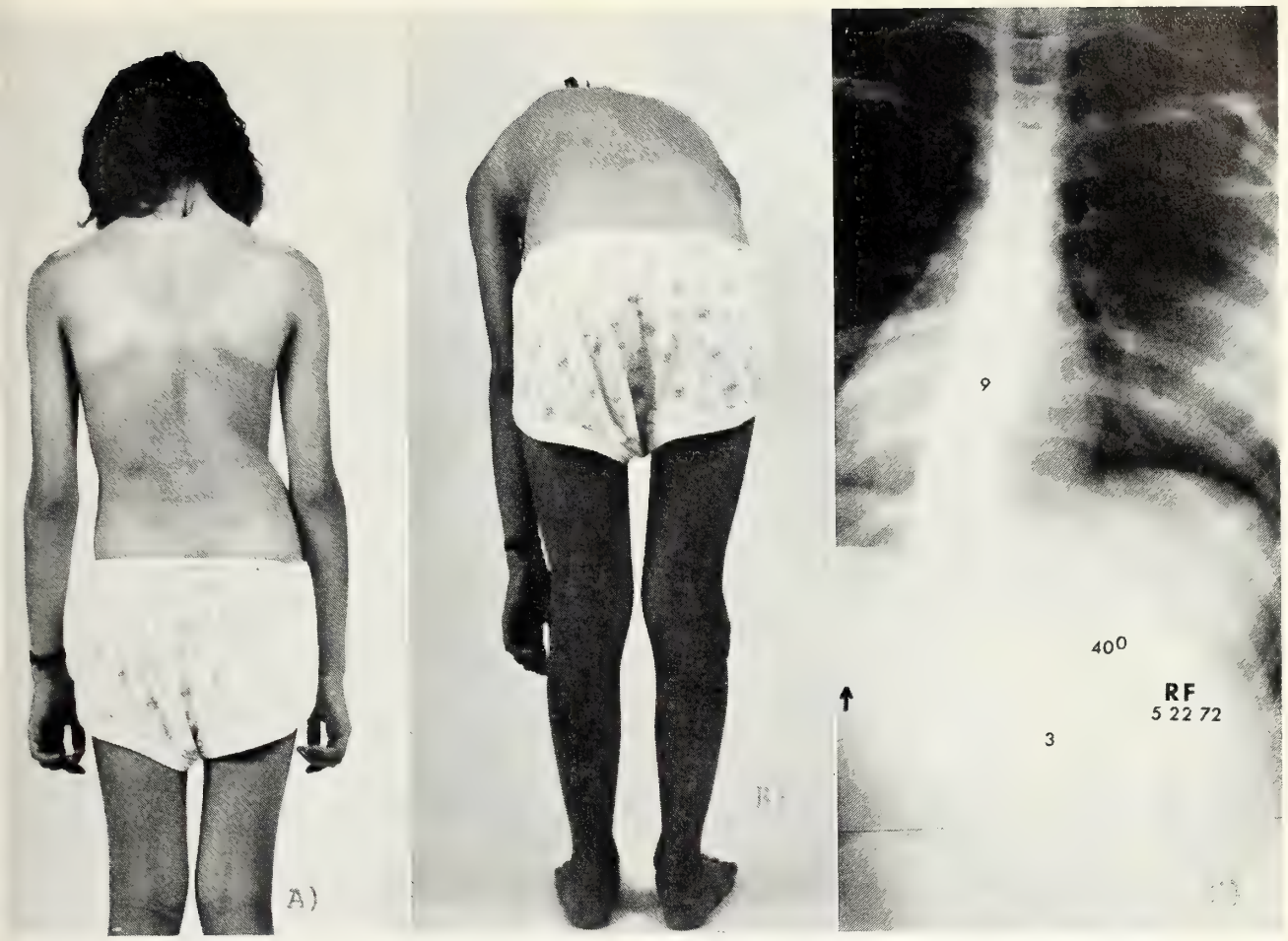


Figure 4. A) Photograph of a 12-year, 6-month-old girl showing arm-body distance asymmetry and trunk shift to the left. B) Forward-bending photograph of the same patient demonstrating a left lumbar hump. C) Standing x-ray of the same patient revealing a 40-degree left thoracolumbar curve.

tive adolescent years, special effort should be made to encourage these patients and their families. Some method of patient and family education regarding scoliosis in general, its treatment, the time span involved, and the expected results is most beneficial. This will result in a more cooperative patient and will help to eliminate possible family conflicts.

Preliminary Results of School Screening

A scoliosis school screening program has been in effect in Delaware for several years and reportedly was successful in nearly eliminating the need for surgical treatment of idiopathic scoliosis.[10] During the past school year, 210,000 (75%) vulnerable-age school children were screened in Minnesota, with approximately 7 per cent being referred to the family physician. Overall, 0.1 per cent were found to require treatment. According to P. Green, R.N., School Nurse Consultant, Kansas State Department of Health and Environment, 11,924 school children of vulnerable age in Kansas were screened last year by school nurses, and 3.8 per cent of these were referred to the family physician.

Universal scoliosis screening of school children ages 10 through 13, with followup as recommended, should nearly eliminate the need for surgical treatment of idiopathic scoliosis. An added benefit is that other less common spine deformities may be detected at a more optimum time for treatment.

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Figure 4. D) Standing lateral x-ray of the same patient revealing a pars interarticularis defect of L5 and a Grade 1 spondylolisthesis of L5 on S1.

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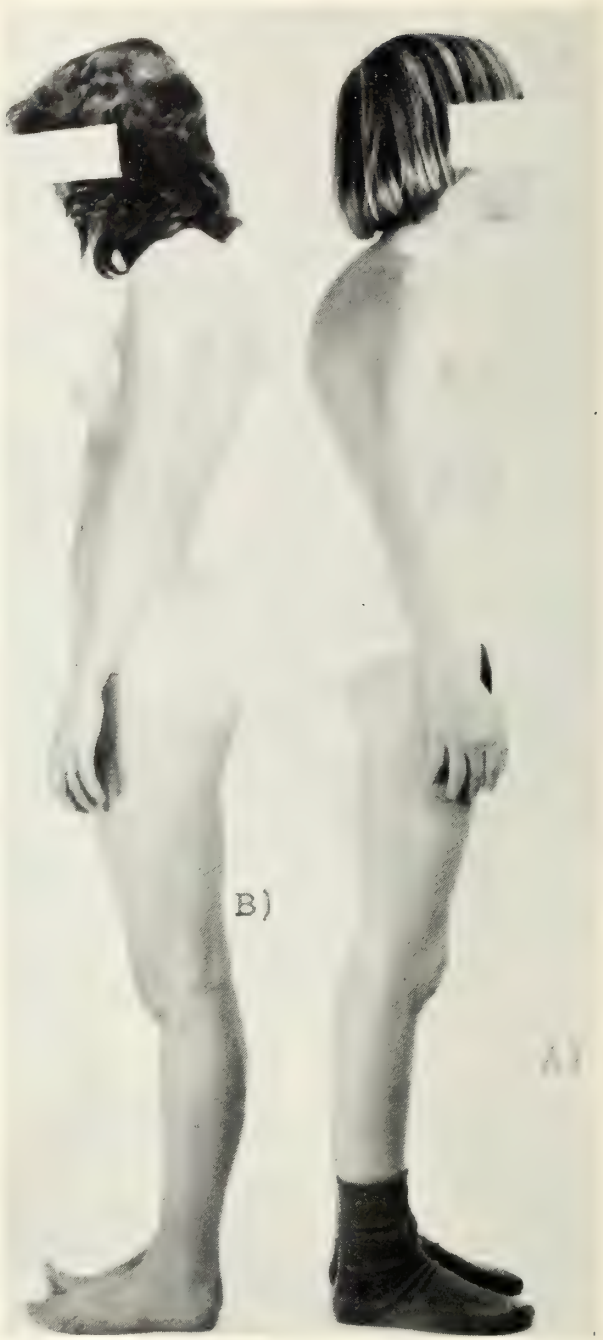


Figure 5. A) Photograph of a 14-year-old boy with increased thoracic kyphosis caused by Scheuermann's disease. B) Photograph of a 14-year, 6-month-old girl with idiopathic lumbar lordosis.

Case Reports

SKELETAL ABNORMALITIES: CLEIDOCRANIAL DYSOSTOSIS

This child came to the pediatrician for routine care and was noted to have the unusual appearance seen in *Figure 1*. He was able to perform the maneuver shown in *Figure 2*.



Figure 1



Figure 2

Cleidocranial dysostosis is transmitted as an autosomal dominant trait, although it is found as a spontaneous occurrence in numerous instances. Many cases have been detected since the first description over 200 years ago. The most striking abnormality is the range of shoulder movement permitted by uni- or bilateral aplasia or hypoplasia of the clavicle. The neck usually appears long and the shoulders narrow and drooping; the skull shows frontal and parietal bossing and the face appears small with a nose with broad base and depressed bridge. Other associated anomalies have been recognized and are usually found in the skeletal system. Other abnormalities are unusual.

Appearance of children is typical and recognition is important for accurate diagnosis and genetic counseling.

Ronald D. Greenwood, M.D., Boston, Massachusetts

SEVERE IRON DEFICIENCY ANEMIA

This case is presented because the level of hemoglobin was unusually low and also because of patterns developed in treatment of upper respiratory infection in children.

The patient was a 15-month-old black female, who was apparently well until two weeks prior to seeing her family physician for an upper respiratory infection. This was treated with ampicillin and a cough preparation. The child continued to run a low grade fever and was lethargic. Because of lack of response, a c.b.c. was done which revealed: hemoglobin, 2.5 gm/100 ml; hematocrit, 12%; RBC, 1,179,000; WBC, 3,579 (corrected); differential: 41 segmented leucocytes, 57 lymphocytes, 2 eosinophiles, 2 nucleated RBCs, 4+ hypochromasia, anisocytosis and poikilocytosis.

Past history was noncontributory, except for this infant being the youngest of eight children, and the fact that the older siblings have taken care of this infant, especially feeding. Although the child had teeth, she did not take solid foods well, and most of her diet consisted of milk, cereals, juices, etc., which had been bottle fed.

Physical examination revealed an acutely ill, lethargic, listless, fairly well developed, poorly nourished black 15-month-old infant, with a weak cry. Her temperature was 101.4F (38.4C), pulse 120, and respirations 20. There was a noticeable bilateral periorbital edema, and the conjunctivae were pale. There were a few scattered rhonchi over both sites of chest, but no rales. There was moderate enlargement of the spleen. Muscles were hypotonic and there was a slight pitting edema of both lower extremities. Physical examination was otherwise non-contributory.

Prior to any definitive treatment of this youngster, Sickling preparation proved negative and bone marrow examination showed only typical marrow of iron deficiency anemia.

After the child had been hospitalized for several hours, hemoglobin was approximately the same as pre-hospital reading, with one nucleated RBC/100 and MCHC of 29%. Differential done at this time was on 50 cells, because of anemia, but it was normal.

	Patient	*Normals*
Serum iron	14 mg	57-194
Total iron binding capacity	440 μg	228-418
Unsaturated iron binding capacity	426 μg	
Percent saturation	3.2	25-50

The child was transfused with 350 cc whole blood and improvement was noticeable within 24 hours. The child was more active and alert, and was afebrile in 48 hours. She was placed on a regular diet for her age. This posed a problem, because the child had little experience with solid foods and the nursery personnel had to teach her how to eat. A regimen of iron by mouth was prescribed, after the single transfusion, and the patient was dismissed from the hospital after five days.

	HcT %	*Hgb*	*MCHC* %	*RBC*	*WBC*
16 hrs post transfusion	27	9 gm	33		
5 days post transfusion	31	8.8 gm	28.5		
12 days post transfusion	35	10.4 gm	33	3,650,000	13,756
26 days post transfusion	38	12 gm	33	4,620,000	

At the last examination 30 days following the initial hospitalization, this child was alert and healthy, and exhibited no untoward effects from the severe anemia.

In summary, several salient points need to be noted: (1) iron deficiency anemias probably are more prevalent in infants and children than is realized; (2) the host's resistance to upper respiratory infections or other infections is diminished because of the profound anemia; (3) in black or dark complected people these anemias might be missed unless a hematocrit and hemoglobin determination is made; (4) in large families, where there is a wide age differential in children and parents have delegated the responsibility of child rearing to 14-year-olds and other teenagers, the line of least resistance may be followed in feeding and child care.

Porter E. Barbera, M.D., Independence

(Continued on page 315)

MID-AMERICA TELEPHONE CONSULTATION HOT LINE

What Is MATCH Line?

- Communication via a fast, efficient and reliable telephone system providing immediate consultation between physicians and cancer specialists at the Mid-America Cancer Center Program.
- A service provided by the Mid-America Cancer Center Program at the University of Kansas Medical Center and the Kansas Division of the American Cancer Society for physicians in Kansas and Greater Kansas City, Missouri with the goal of improving patient care.
- Education for the private practitioner to provide reinforcement of his knowledge and to transmit additional, new, and current cancer information in a setting wherein that information may be immediately utilized in his office.

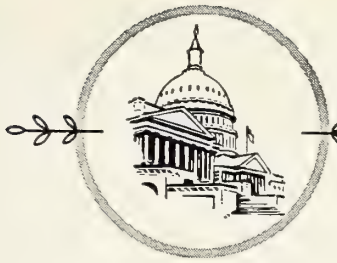
How Can MATCH Line Help You?

- MATCH Line will strive to assure constant and instant availability of personal consultation with cancer specialists in pathological and clinical diagnosis, multimodality therapy, infectious complications, and physical and psychological rehabilitation. MATCH Line will frequently permit consultation while the patient remains in the physician's office or examination room.
- MATCH Line will foster the role of the private physician in the team approach to patient care by facilitating referrals when necessary, by providing the private physician timely patient progress reports, and by supporting the physician in followup therapy regimens.
- Upon request or at the suggestion of the faculty responder, abstracts of relevant publications from the library's resources or through the National Cancer Institute's CANCERLINE will be immediately mailed to the physician to reinforce the results of the consultation.

MATCH Line will be in service January 2, 1976 with two toll free exchanges. An operator will be on duty weekdays from 8:30 to 5:30. All calls will be monitored by the operator for system evaluation purposes only, i.e. frequency and type of calls, identity of caller and responder, etc.

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Socio- ECONOMICS

The Disabled Physician

HERBERT C. MODLIN, M.D., ***Topeka***

A PROFESSION, in contrast to an industrial organization, tends to set its own standards of ethical conduct, indoctrinate its novitiates in the behavioral requirements of that profession, and monitor their subsequent role performance. The professions generally teach professional ethics and decorum commendably, but are notably less praiseworthy in enforcing adherence to their standards. In the aftermath of Watergate, it seems almost unsporting to confront the legal profession on this point; so let us question ourselves.

Self-policing is admittedly an onerous task which few vocational groups in our society undertake fully and voluntarily. Pursuit of the task requires a sanctioned program of intragroup inspection, a critical stance toward one's self and one's colleagues, and willingness to fix responsibility, to demand change, even to impose penalty. We in medicine have been committed to the task since Hippocrates, but probably not committed enough.[1, 2]

One constraint on our vigorous scrutiny of each others' performance is our very condition of professionalism. This is the crux of the matter, whether we are considering our accountability to each other, a peer review committee, HMO administrator, insurance company, jury, or the general public. One of our better social thinkers, Amatai Etzioni,[3] presents the following definition of professionalism:

> Students of the professions have pointed out that the autonomy granted to professionals who are basically responsible to their own consciences . . . is necessary for professional work. Only if immune from ordinary social pressure and free to innovate, to experiment, to take risks without the usual social repercussions of failure, can a professional carry out his work effectively . . . in other words, the ultimate justification for a professional act is that it is to the best of the professional's knowledge, the right act. He might consult his colleagues before he acts, but the decision is his. If he errs, he still will be defended by his peers.

As Etzioni reminds us, traditionally, individual physicians are accountable for their professional performance, primarily, to their patients and, secondarily, to their own consciences. They are not restricted by supervisors, inspectors, or a mandatory retirement age. The physician disabled by physical or mental illness, including alcoholism and drug abuse, is manifestly not competent to function as his own diagnostician, disciplinarian, or therapist. These functions must, then, be exercised for him by his colleagues.

What is the extent of significant disability in practicing physicians? Assuming that we are intent on identifying our handicapped colleagues and insisting that they get help, how large is the task apt to be? Reliable data are scarce, for a variety of reasons.

First, the physician-patients tend to avoid and deny patienthood; they hide their syndromes from their peers, from their families, and from themselves.[4, 5] Admission of illness and need for treatment threaten economic loss and, if there is probability of moral or legal opprobrium, damage to their professional careers. More importantly, the specter of disability is a threat to their self-concept, self-image, and self-esteem. What is so useless as a physician who cannot practice medicine, even temporarily? This query is hardly a comprehensive and decisive assessment of the ill physician's predicament, but to him it well can be.

Second, the disabilities of most frequent concern are neurological and psychiatric illnesses without easily observable manifestations. There is usually no limp, wound, crutch, or pain-ridden facies to reveal the slowly progressive pathology. The secret drink, surreptitious pill, private thought of suicide, incipient tremor can sometimes be successfully masked over a long period,

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sometimes with the witting or unwitting collusion of family and colleagues.[6, 7]

Third, the medical profession is prone to ignore or deny subtle clinical evidence in their colleagues which a disinterested observer might unhesitatingly broadcast. Who are we to expose our colleague, to intrude into his management of his own affairs? "There, but for the grace of God, go I." This attitude has been characterized as a conspiracy of silence; are not a number of us guilty of such unplanned plotting? A poignant comment from a physician-patient[8] illustrates the problem:

> I am that common but rarely mentioned problem, the drug-addict doctor. Depending upon who you talk to, I am an amoral bum, an ill-used and tragic figure, an embarrassing statistic, a blameless sick man, or a disgrace to the profession.
>
> Actually, I am none of these things, or perhaps a little bit of all of them, but eight years of fighting the problem have made one thing discouragingly clear: The most enlightened medical profession that civilization has ever known, in the wealthiest country in history, doesn't know how to treat me, and really doesn't want to know.

This may be considered an extreme statement, but for that very reason it is educational.

Statistically, we are on relatively firm ground concerning narcotics addiction: the physician-addict is usually discovered. His source of supply is not his addicted friends or the street pusher, but the pharmacy, the ward cabinet, or the prescription pad. A survey conducted by the Council on Mental Health obtained adequate data from representative state boards of medical examiners to conclude that about 1.5 per cent of practicing physicians suffer narcotics addiction—over 4,000 physicians in the United States.[8] There is evidence to support the contention that physicians' covert self-medication with sedatives, tranquilizers, and stimulants occurs far more frequently than narcotics ingestion.[9]

Figures regarding alcoholism of physicians are unreliable. A reasonable assumption is that the incidence is several times greater than narcotics addiction, since unlimited quantities of alcohol are readily and lawfully obtainable, and since liberal consumption of alcohol is socially permissible. Licensing board statistics indicate that 2 to 3 per cent of practicing physicians are subjected to disciplinary action because of uncontrollable drinking.[8] This percentage probably represents the tip of the iceberg.

Unquestionably, severe psychoneuroses, functional psychoses, character disorders, and chronic brain syndromes affect physicians, but the frequency is unknown. Statistics on hospitalized physicians are easily available, but only the cases requiring institutionalization are recorded. Findings from studies in the United States,[6] Great Britain[10] and Canada[11] are roughly similar: approximately 25 per cent of the hospital admissions are for drug addiction; 25 per cent for alcoholism; 25 per cent for functional psychoses, and 5 per cent for chronic brain syndromes.

One of our best publicized numerical exposés regarding doctors' reactions to reality as they experience it concerns suicide. Resort to suicide is, in one large school of thought, considered symptomatic of mental ill health. Current studies are more objective and utilize better methodology than some of the first articles published in the 1960s, but the results are similar.[12, 13] The obituary pages of *JAMA* present the most reliable demographic data. In various compilations and statistical treatments of those data the suicide rate among physicians appears in excess of the rate in the general population. There are differences within the profession depending upon sex and type of medical practice. The rate for female physicians is three times higher than for males. In percentages by specialties, psychiatrists head the list and pediatricians are last. Another way of summarizing the data is to state that over 100 physicians commit suicide annually, a number equivalent to the size of the average medical school graduating class.[13]

The incidence of early handicapping neurological disorders, ophthalmological disorders, and other subtly developing physical impairments is indeed unknown except through anecdotal references. Multiple sclerosis, amyotrophic lateral sclerosis, Parkinsonism, and senility are among the more apparent chronic progressive disorders. Afflicted doctors tend to deny them since they develop insidiously. Keen clinical observation, by all of us—of all of us, could promote discovery of such handicaps; but we are obviously reluctant to become unsolicited diagnosticians of each other.

A final point and a very new one: a psychiatrist, member of a peer review committee, has contributed to our deliberations a most unsettling set of observations.[13] Until the recent advent of utilization review committees, most physicians have had little experience in evaluating medical practice by their peers. In hospital staffs, the occasional physician with eccentric practice habits ordinarily becomes recognized and, although he may be tolerated, is probably subject to many important restraints. Peer review requirements of Medicare and Medicaid may now be opening up Pandora's box. The psychiatrist who functions as a peer review committee member frequently has his clinical curiosity stimulated by particular instances of somewhat unconventional practice habits which are brought to the attention of the committee. It is inevitable that occasionally his conclusion may be that some of the doctors under scrutiny probably are not well enough mentally to practice medicine at a

satisfactory level of performance; that underlying eccentricities of practice patterns may well be concomitant psychopathology.

One physician, for example, appeared hostile and aggressive, and seemed to suspect the peer review committee and other county medical society officials of persecution and jealousy. He presented a clinical note, written by him, published some years previously on a procedure (cerebral circulation time) which even then was likely of doubtful value. Especially striking was the fact that he applied the outmoded and inefficient procedure to every patient at every visit. His behavior and thinking impressed the committee as very probably morbid.

In another example, the committee investigated a surgeon who seemed to specialize in removing large numbers of questionably existent papillomas in his frequent and repeated proctoscopies of elderly patients. Although his sensorium seemed to be unaffected, there may have been some disturbances in his reality orientation, in that he seemed to move in a dream world. He constantly quoted alleged literature in a way not understandable. He brought the committee an illustrated article on "Tumors of the Bowel." Asked if the article in any way substantiated his position, he claimed that it did. A committee member, after carefully reading the article, challenged the surgeon's interpretation, stating that the author of the article maintained a contrary position. The surgeon responded, "Well, I just wanted to show you the picture." He was manneristic, and his thinking may have been distorted by his attempts to save face. Also, it may be that his unnecessary proctoscopies with the fulguration of so-called papillomas in elderly patients were an outgrowth of peculiar fantasies.

Such problems as these two examples represent may indeed appear to us as a can of worms, but I am inclined to agree with my psychiatrist colleague that we may have to plunge our hand into it.

No discussion of causes and remedies for the afflictions of the disabled physician is complete without mentioning the possibility of prevention. Many writers urge educational efforts by faculty and staff members of medical schools and hospitals for students and house officers. Of particular current concern are reports that medical students are using marihuana, LSD, and other mind-altering drugs. The cavalier attitude of many students toward self-medication is alarming. Considering the fact that physicians often work long hours under sustained pressure, and because most types of drugs are easily procured by them, they must be considered a high risk population in the matter of drug abuse. The occupational hazard should be seriously discussed with medical students and kept in the forefront of their awareness. A clearly defined, confidential source for help against the hazard from an experienced physician should be afforded every medical student body.

Among the many appellations which tag our social upheaval these days, one is especially pertinent here: this is the Age of Accountability. The medical profession, true to its oath, must collectively be accountable to the public for provision of the best possible medical care to meet the needs of society. When, occasionally, the discharge of such accountability is compromised by physicians whose functioning has been impaired by medical or psychiatric illnesses, it is fitting and desirable that medical practitioners seek assistance, from the law if necessary, in dealing responsibly, fairly, and humanely with faltering colleagues.

The Council on Mental Health of the American Medical Association, in close collaboration with the Council on Legislation and the AMA Legal Department, has prepared a model legislative statute applicable to the disabled physician. This action has been approved by the Board of Trustees and the House of Delegates, and a copy of the model statute has been sent to state and local medical societies in the expectation that they will wish to stimulate legislative action in all of the 50 states.

Pioneering effort in the development and passage of such a statute is attributable to the 1969 Florida Legislature. Two years later, a similar act was passed in Texas. The AMA model statute borrows freely from those laws, particularly the Florida statute, which has now been tested for five years. The signal accomplishment of the Florida statute was in its providing an alternative to the previous punitive law, by emphasizing specific measures for the treatment and rehabilitation of the disabled physician.

The latest information from the American Medical Association is that bills implementing management of the disabled physician's plight have been passed or introduced into the legislatures of eight more states. This action, promoted by state medical societies, speaks well for physicians' sense of responsibility.

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Medical School Applicant

A Study of the Admission Interview

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ACTUAL IMPORTANCE of the interview in the medical school admissions process has been discussed for decades. Yet little data are available to determine how effective interviews are in choosing potential physicians from a large pool of qualified applicants. Although the validity of the personal interview has been questioned, it is one of the most widely used techniques medical schools have to assess non-intellectual characteristics of applicants. According to the 1975-76 *Medical School Admission Requirements Handbook,* published by the Association of American Medical Colleges, 104 of the 109 medical schools in the United States who provided data interviewed all of their entrants.[1]

The admissions process at the University of Kansas School of Medicine relies heavily on personal interviews with applicants. Three candidates are interviewed at one time by a team of three members. Each team is composed of a basic science faculty member, a clinical faculty member, and a practicing physician of Kansas, assigned either by the Kansas Medical Society or the Kansas Academy of Family Physicians. Interviews are approximately one hour in length. Applicants' academic records are not known to the interviewers until after the interview is completed and the interview report written. Thus, at the time of the interview, the interviewers have available to them only the applications submitted by candidates. Final admissions decisions are made with the consideration of other factors (grades, Medical College Admission Test scores, premedical advisors reports, etc.), but interviews are conducted without the knowledge of these other credentials.

Since interviews have become a major consideration in the admissions process at the University of Kansas School of Medicine, it was decided to make an interview questionnaire available to applicants who applied for admission to the first-year class beginning in 1975, to determine interview content and to evaluate the applicant's perception of the interview.

Method of Study

An eleven-item questionnaire was designed which would provide information about the personal interviews. Nine of the eleven questions requested either a "yes" or "no" response to eliminate neutral opinions on these items. Of these nine, three allowed for written-in responses in addition to "yes" or "no." The remaining two questions were concerned with the length of the interview and the applicant's perception of how the interview might affect chances for admission, and had listed choices for the applicant.

In spite of the many reservations about the interview, as expressed by members of admissions committees, medical schools maintain the interview as an integral part of the total admissions process.

Resident and non-resident applicants were interviewed during a four-day period in December 1974, and January 1975. Interviews were unstructured and interviewers were asked not to directly ask grade point averages or MCAT scores of any applicants. No other restraints were placed on the interviewers. Immediately following the official interviews, applicants were asked to voluntarily complete the questionnaire. They were told not to place any identifying marks on their questionnaire, and that their comments would in no way influence the admissions decision.

Students interviewed for the early decision program were interviewed under slightly different conditions (two applicants and two interviewers) than those during regular admissions. Therefore, data for early decision applicants have not been included in this study.

Responses to questions have been tabulated and results expressed in a percentage manner, since all applicants did not respond to every item included in the questionnaire. At least 407 applicants responded to

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every question except the "other" choice in the item which determined interview content and had 198 responses.

Results

In order for the interview to be a valid assessment of the applicant under essentially normal conditions, applicants were asked if interviewers made an attempt to make the applicant feel at ease during the interview. Ninety-two per cent of those responding indicated that this was true. Ninety-three per cent of the applicants reported that they felt reasonably at ease during the interview.

Since motivation plays an important role in determining the ultimate success of the applicant as a potential medical student and potential physician, it was decided that a question be included which asked applicants if they thought an attempt was made to ascertain their motivation for pursuing a medical career during the interview. Seventy-eight per cent responded affirmatively to this question.

Many rumors are widely circulated among premedical students concerning the medical school admissions interview. Some of the ideas and anxieties related to the interview may adversely affect applicants to the extent that their interview performance suffers. Thirty-six per cent of the applicants responded positively to the question which asked if they had any preconceived ideas or anxieties about the interview which were proven true. For this question, applicants were asked to list the ideas or anxieties they had if they answered "yes" to the initial question. Some of these written responses included: anticipated many of the questions asked, tried to ascertain insight into personality, asked questions concerning outside interests, covered topics of controversy, asked many thought and theory questions, interviewers tried to make the interview low key and casual, and detailed science questions were not asked. Although applicants expressed feelings after the interview which were predictive based on pre-interview ideas or fears, many applicants apparently did not interpret the item as it was intended. If the same questionnaire is used in succeeding years, the construction of the item will need to be altered.

Applicants were also asked if they had any preconceived ideas or anxieties about the interview which were proven unfounded. A positive response was indicated by 37 per cent of the applicants. Again, applicants were asked to write phrases which would indicate what fears and ideas they had heard which were not true about the interview. The following include some of the written responses to this item: grilling, horrifying, intimidating, stressful, hostile, "put on the spot," harassing, badgering, "back us into a corner," hassling, expecting an interrogation, and brow-beating. Forty-seven per cent of the applicants who wrote in responses used one of the preceding phrases to answer this question.

Applicants were given a list of nine topics which are frequently discussed in an interview, with a tenth possibility being "other," in which applicants were asked to supply the topic which would come under this heading. *Table I* includes data for the nine specific items listed on the questionnaire. It can be seen that the most common topic in the interview was the applicant's extracurricular activities. Of the nine items listed, the essay concerning why the applicant wanted to attend the University of Kansas Medical School was the least discussed. Words or phrases commonly written in under the "other" category included: socialized medicine, euthanasia, current issues and problems in medicine, future of medicine, medical ethics, health care delivery, and ecology.

Interview teams are greatly concerned with the prediction of the success of each applicant as a medical student and a potential physician. Sixty-three per cent of the applicants responding thought that questions were asked during the interview which were pertinent to determine if the applicant would make a good medical student. Seventy-seven per cent of the applicants thought that questions were asked in the interview which were relevant in the determination if they would make a good physician.

TABLE I
INTERVIEW CONTENT

	% of Affirmative Responses
During the interview, the following areas were discussed:	
Extracurricular activities	67
Hobbies	46
College	61
Collegiate academic career	51
Essay concerning why you want to become a physician	48
Essay concerning why you want to attend KUMC	26
Employment (summer or otherwise)	54
Parent's employment	29
Philosophy of life	34

When asked if applicants thought that the interview has a "proper" place in the medical school admissions process, 99 per cent responded affirmatively. Eighty-two per cent of the applicants thought that the interviewers knew them as a person better after the interview than before the interview. When asked how the applicants felt about the length of the interview, 43 per cent thought it was too short, 55 per cent thought it was the right length, and 2 per cent thought it was too long.

Applicants were aware of the important role which the interview plays in the admissions process at the University of Kansas School of Medicine. Applicants were asked what effect they thought their interview would have on their chance for admission. Sixty-two per cent thought the interview enhanced their chance for admission, 6 per cent thought it decreased their chance for admission, and 32 per cent thought their interview would not influence their chance for admission.

Discussion

Although the importance of the interview is questioned by members of medical school admissions committees and applicants, it appears that both parties value the interview. If 104 of the medical schools interview all entrants, this seems to indicate a place for interviews in the medical school admissions process. Applicants also believe the interview should be a criterion for admission, as demonstrated by a 99-per cent positive response to this item in the questionnaire.

It appears from the data that applicants are reasonably at ease during the interview, which allows interview teams to assess candidates in a comparatively relaxed situation. It is realized that some anxiety exists in every applicant, but this must be minimized in order for applicants to be evaluated accurately. It is interesting that most applicants were aware of the fact that the interviewers made an obvious attempt to relax them. This is especially true of the many applicants who thought they were going to be grilled or harassed. The origin of the stories of stressful interviews has not been determined; rumors may begin on a college campus which then are expanded and exaggerated. A preconceived, negative attitude about the interview may seriously jeopardize an applicant's admission if he or she does not perform as well as possible because of these rumors.

It is not surprising that the extracurricular activities of the applicants were the most common item for discussion in the interview. This is a good subject area with which to begin the interview, because applicants usually feel at ease discussing a topic familiar to them. Also, extracurricular activities are probably one of the most diversified topics discussed on the application form and during interviews. When over 400 prospective students are interviewed, the range of activities is extremely broad. It is interesting that there was a difference of 21 per cent between hobbies and extracurricular activities discussed in the interview, because these seem to be closely related topics. The fact that only 26 per cent of those interviewed were questioned about why they wished to attend KUMC is not surprising, since applicants are asked to write their reasons on the application, and questions in this area may have been redundant.

Two of the main functions of the interview at the University of Kansas School of Medicine are to assess each applicant as a potential medical student and a potential physician. From data gathered, it appears that most applicants were asked questions which would allow the interviewers to make these predictions.

Motivation is a critical factor once the applicant has been enrolled in medical school. Grades, MCAT scores, and other data are somewhat predictive of success in medical school. However, motivation seems to be the major factor which will insure successful completion of medical school. In almost eight out of ten interviews, students reported that questions concerning their motivation for studying medicine were asked. Evidently, most interviewers recognize the importance of this factor during students' medical school careers.

It appears that many applicants were concerned about the length of the interview. Although each may only be speaking for a segment of the total interview period, many interviewers may learn a great deal by observing applicants when they are not conversing. Does the applicant pay attention to his or her colleague who is speaking, or does he or she remain aloof? Do applicants appear overly nervous while waiting to have their chance to respond to a question? These and many more personality traits may be gleaned from periods in the interview when applicants are possibly the most relaxed.

Almost two thirds of the applicants thought that their interview enhanced their chance for admission, while only 24 applicants out of 407 thought their chances were decreased. Applicants had a positive perception of their interview and how they performed during this critical period in their lives. This and other items on the questionnaire were suggestive of the positive attitude most of the applicants had of the interview.

Summary

The validity of the interview remains obscure. However, as long as admissions committees and applicants believe that the interview has a proper place in the medical school admissions process, the practice will be continued. When the advantages and disadvantages of the interview are weighed, the scale will probably tip in the direction of the advantages. Although many committee members and applicants question the value of the interview, most of them probably interview their nurse, their technician, and other members of their health care delivery team before a final decision on hiring is made. The interview is here to stay; if not by reason, then by tradition.

The Applicant Denied Admission to Medical School

The number of spaces in medical schools has not paralleled the almost 2.5 fold increase in the total number of applicants. There are, therefore, a large number of applicants who cannot enter their chosen profession.

ACCORDING to the Association of American Medical Colleges (AAMC), approximately 45,000 students have filed applications to medical schools to enter in 1975. It was estimated by AAMC that only about 14,800 of these applicants will enroll in a medical school, or only about one third of the total applicant pool. These data are in contrast to those of eight years ago, when only 18,724 individuals applied for 9,473 spaces, with 50.6 per cent of the applicant pool enrolling in medical school.

The University of Kansas School of Medicine received 1,088 applications from students who wished to begin medical school in 1975. However, only 200 of these applicants were enrolled in the first-year class. Although some applicants who were not admitted to the University of Kansas School of Medicine will enroll in other medical schools this year, the number of applicants who will not be admitted to any medical school is still staggering.

It should be stated from the outset that not all applicants who are not admitted to the University of Kansas School of Medicine are considered rejected applicants. The majority of these unsuccessful applicants, however, have been denied admission not because of inadequate academic and personality characteristics, but because of the limited number of spaces in our medical school class. Many students who would have been admitted five years ago cannot be admitted to medical school today. Competition among premedical students has become so fierce that the quality of the total applicant pool has improved vastly during the last decade. Many of the denied students are academically capable of completing medical school curricula and ultimately becoming highly qualified physicians, but space limitations have forced them to seek other alternatives.

What, then, are some possible fates of these denied applicants to the University of Kansas School of Medicine? Many of these students decide to reapply to medical school. If a student has been denied at any medical school, he or she should attempt to ascertain why admission was not granted. In many cases, specific factors in the negative decision cannot be determined. However, general criteria, such as low grades or low Medical College Admission Test (MCAT) scores, may often be the opinion of the admissions officer as to why the applicant did not garner enough affirmative votes for admission. It is the responsibility of medical school admissions officers to aid in the counseling of denied applicants, so that they may enhance their chances of admission upon reapplication if it is desired.

Many denied applicants to our medical school assume that graduate school is the panacea for a subsequent successful application. If a student applied to a medical school with a 3.8 overall grade point average and with comparable grades in the premedical required science courses, would the reason for denial primarily be based on grades? Probably not. In evaluating other admissions criteria in the applicant's folder, it may be seen that the applicant has performed poorly on the MCAT. Would the solution to this student's dilemma not be retaking the MCAT after conscientious preparation and scoring at levels which correlate with 3.8 grades? If a repeat of the MCAT is the most logical means of improving admissions credentials, why then enter graduate school? It must be stated that an applicant with high MCAT scores and undergraduate grades

not in keeping with the MCAT scores may profit from enrolling in a master's or doctoral program. The rationale for the graduate school as a repository for denied medical school applicants can in many instances be questioned. However, some medical schools may encourage denied applicants to pursue graduate degrees. Denied applicants should contact admission officers to determine the philosophy of individual institutions in this regard.

Some denied applicants elect to take an extra year of college at the undergraduate level as special students to improve their grade point average. Many undergraduate colleges allow students to enroll in this manner. If a student were to enroll in a graduate program, the graduate curriculum is usually so well defined that a student, as a reapplicant, may not be able to take courses which would be most beneficial. The flexibility which a special student has as far as choosing selected courses is a prime advantage over the graduate school curriculum. Admissions committees may suggest that a denied student take a full load of science courses before reapplication. For a special student, this is possible; for a graduate student, this may be out of the question.

A denied applicant should also reflect on medical schools to which he or she applied. Many students do not apply to enough medical schools or apply to only state supported institutions. The average successful applicant usually applies to about eight medical schools. Of these, the student should apply to the state supported school of his or her home state; the remainder of the applications should be submitted to private schools. A listing of these schools is included in the book *Medical School Admission Requirements* published by AAMC. Since almost all of the state supported medical schools give preference to their residents for admission purposes, many non-residents may be wasting their time and effort by applying to these institutions. In most cases, only highly qualified non-residents are admitted to state supported medical schools. However, private schools usually do not consider the state of residency as an important admissions factor unless geographical distributions are considered in their admissions process. If the applicant were a resident of a state in which two state supported medical schools were located, it would seem prudent for that student to apply to both state schools, and then apply to at least six of the private institutions.

It is the responsibility of admissions officers to indicate to the denied applicant whether or not it is worth while to submit a subsequent application. This advice may be very difficult to determine, since admissions of students are usually committee decisions. In many instances, definite encouragement or discouragement cannot be given the applicant. However, based on years of experience with admissions committees, the admissions officer can usually predict the feeling of the overall committee concerning an individual applicant and his or her application credentials. It is important to encourage possible successful reapplicants; it is equally essential that in instances where it may not be wise for the denied applicants to reapply, that they be told.

If it is deemed better for the applicant that an alternative vocation be found, the student should be directed to the appropriate resource person to determine if the student may be a likely candidate for admission into another career. Alternative careers such as physical therapy, physicians' assistants, nurses, radiological engineers, speech pathologists, respiratory therapists, and others are available to the student. Students should seek out information in these various fields in an objective manner to determine further action. It must be emphasized that the need for students to enter allied health professions is now being maximized due to the need for a more comprehensive health care delivery system in our country for today and the future. Not everyone can be the leader of the health team, but the delivery of good health care is truly a team effort, composed of highly dedicated professionals.

In contrast to paramedical careers, it is better for some denied applicants to pursue a profession totally divorced from medicine. Many denied applicants harbor deeply hidden, lingering desires for medicine which often surface when the student is in intimate contact with those who were selected to enter medical school. This situation is particularly prominent when a denied medical school applicant is enrolled in a health-related field in a medical center setting. Denied applicants may be taking the same course a medical student is. They may even be in the same room and class, but they are in different groups. Many students experience overt frustrations by these associations which may ultimately lead to a student leaving the program, or continuing with such strong internal anxieties that the student is not performing at his or her potential. A denied applicant who may exhibit these feelings should probably be encouraged to enter a profession totally removed from medicine, such as teaching, business, or engineering. The decision to abandon medicine may be a difficult one for this type of applicant, but it may be the best avenue in the long run.

Counseling denied applicants is one of the most diffi-

cult functions of an admissions officer. Since most of these decisions are made by committees, the admissions officer must attempt to ascertain how each committee member would view each unique situation. Honesty must be an integral facet of this counseling procedure. To encourage a poorly qualified applicant to reapply is overt dishonesty, both with the student and with the institution. On the other hand, a borderline student who was denied admission and who wishes to submit a subsequent application should be encouraged to remedy areas of weakness in an attempt to enhance his or her chances for admission.

The denied applicant must, in reality, look into a mirror, analyze the image, and then pursue a course of action specifically suited to his or her long-range goals. Psychologically, it may be difficult for denied applicants to turn their backs on the medical profession, but it may be the best solution. For those whose credentials are competitive, a year of rigorous academic activity or retaking the MCAT may be the answer. If these students wish to pursue medical school, they may go as far as their motivation will carry them. For some, that is a long way.

Reference

1. Wilson, V. L.: *Medical School Admission Requirements.* Association of American Medical Colleges, Washington, 1974.

Academic and Demographic Characteristics of KUMC Applicants

The number of applicants who sought admission to the University of Kansas School of Medicine for the class beginning in 1974 reached a record high. There were 998 applicants who competed for 163 spaces in the first-year class. Some academic and demographic characteristics of these applicants have been collected and are presented in this paper.

THE TOTAL applicant pool included 392 Kansans; the remainder indicated other states of residency. The 606 non-residents represented all states except Alaska, Delaware, Louisiana, Mississippi, West Virginia, and Wyoming *(Diagram 1)*. The largest number of non-residents (113) listed California as their home, with the next largest number (96) residing in New York. Since the population density of these two states is high, these figures are not too surprising. The third highest number of non-resident applicants (55) indicated that Missouri was their home state. The sizeable number of Missourians applying to the Kansas school may be attributed to the intimate geographical location of these two states. From the states which do not have any medical schools within their boundaries (Alaska, Delaware, Idaho, Montana, and Wyoming), six applicants sought admission to our school. From the four states which are located adjacent to Kansas (Nebraska, Missouri, Oklahoma, and Colorado), 98 applications were received from their residents. This total may appear somewhat low, but it must be remembered that each of these states has its own medical school where residents are given preference.

Of the 998 applicants applying for admission, 797 were males and 201 were females. There were 76 females from Kansas and 125 females who claimed residence in states other than Kansas. At the time of application, 249 students indicated they were married. The total applicant pool represented 299 colleges and universities throughout the world.

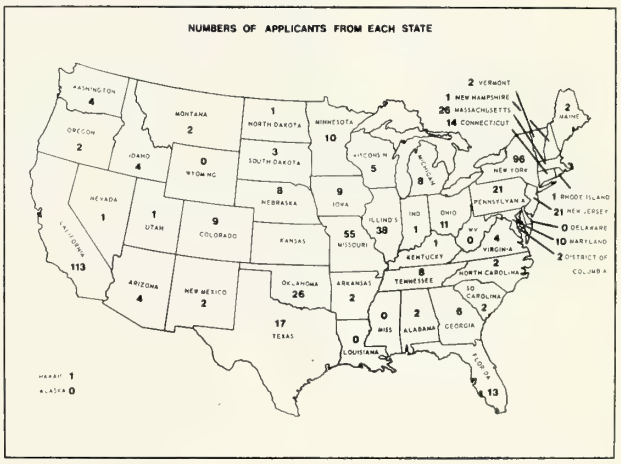


Diagram 1

From the 392 Kansans who applied for admission to the class of 1974, 62 of the 105 counties in the state were represented according to information supplied by the students on their applications *(Diagram 2)*. The greatest number of Kansas applicants (85) resided in Johnson County. Sedgwick County was the home county of 66 applicants, and Douglas and Shawnee counties

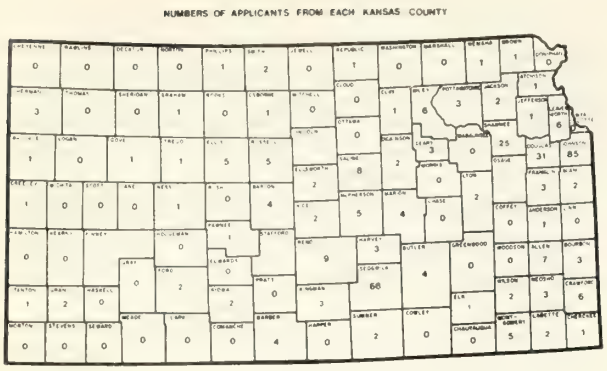


Diagram 2

provided the third and fourth highest numbers of applicants, with 31 and 25 respectively. Of the remaining 58 counties which supplied the medical school with applicants, all had under ten applicants, and 48 had fewer than five. With a quick glance at *Diagram 2,* it can be noted that few applicants reside in the counties which are located entirely west of Highway 81. The paucity of applicants from the western Kansas counties may help account for the lack of physicians practicing in this geographical area of the state.

Of the 904 applicants who submitted an undergraduate college transcript, the mean grade point average at the time of application was 3.19 on a 4.0 scale. Of the 385 Kansans who submitted formal transcripts, their mean grade point average was 3.28 and the 519 non-Kansans had 311 as their mean grade point. Two Kansans and four non-residents had perfect 4.0 grade point averages when they applied for admission. Overall grade point averages for Kansas and non-resident applicants are summarized in *Table I.* It can be seen that 6.5 per cent of the Kansans who applied had an overall grade point average of 3.9 or above, while 2.5 per cent of the non-residents had a comparable grade point average. Almost 38 per cent of the Kansas applicant pool had at least a 3.5 overall grade point average, and 18 per cent of the non-residents were in the same category. Over 74 per cent of the Kansans who applied had an overall grade point average of 3.0 or better, while about 66 per cent of the non-Kansas applicants had this grade point average. Only 10 Kansans and 39 non-residents who applied had an overall grade point average of less than 2.5.

A second grade point average is calculated which is termed the "pre-medical science grade point average." This grade is composed of grades attained in the pre-medical required courses for our school; namely, inorganic and organic chemistry, quantitative analytical chemistry, biology, and physics. The 904 applicants who had their undergraduate college transcripts sent

TABLE I

OVERALL GRADE POINT AVERAGES FOR THE APPLICANT POOL

Grade Points	*Kansans*	*Non-Kansans*
3.90-4.00*	25 (6.5) †	13 (2.5) †
3.80-3.89	18 (4.7)	10 (1.9)
3.70-3.79	30 (7.8)	14 (2.7)
3.60-3.69	29 (7.5)	26 (5.0)
3.50-3.59	35 (9.1)	30 (5.8)
3.40-3.49	30 (7.8)	40 (7.7)
3.30-3.39	27 (7.0)	49 (9.4)
3.20-3.29	37 (9.6)	54 (10.4)
3.10-3.19	29 (7.5)	61 (11.8)
3.00-3.09	26 (6.8)	47 (9.1)
2.90-2.99	24 (6.2)	35 (6.8)
2.80-2.89	25 (6.5)	25 (4.8)
2.70-2.79	22 (5.7)	25 (4.8)
2.60-2.69	6 (1.6)	29 (5.6)
2.50-2.59	3 (0.8)	22 (4.2)
2.40-2.49	7 (1.8)	9 (1.7)
2.30-2.39	4 (1.0)	5 (1.0)
2.20-2.29	2 (0.5)	6 (1.2)
2.10-2.19	2 (0.5)	8 (1.5)
2.00-2.09	2 (0.5)	5 (1.0)
1.90-1.99	2 (0.5)	2 (0.4)
1.80-1.89	0 (0.0)	3 (0.6)
0.50-0.59	0 (0.0)	1 (0.2)
	385 ‡	519 ‡

* 4.0 = A, 3.0 = B, 2.0 = C, 1.0 = D, 0.0 = F.

† Numbers in parentheses indicate percentage of the applicant pool.

‡ Numbers in columns do not include data from the total applicant pool because of transcripts arriving after the deadline, no transcripts received at all, etc.

to us had a mean pre-medical sciences grade point average of 3.15. The mean pre-medical science grade point average for the Kansas applicants was 3.25, while for non-residents it was 3.08. Forty-two Kansans had perfect 4.0 pre-medical science grade point averages, and 23 non-residents had a perfect 4.0. Fifty-seven Kansans (14.8 per cent of the Kansas applicant pool) and 31 non-Kansans (6.0 per cent of the non-resident applicant pool) had pre-medical science grade point averages of at least 3.9 *(Table II).* Almost 37 per cent of the Kansans had at least 3.5 in the pre-medical sciences, and about 22 per cent of the non-residents exhibited a comparable average. Over 68 per cent of the Kansans had at least a 3.0 average in the pre-medical required courses, while 59 per cent of the non-residents had 3.0 or better. Only about 10 per cent of the Kansan applicant pool had below a 2.5 average in the pre-medical required subjects, while about 14 per cent of the non-Kansans were below a 2.5.

TABLE II

PREMEDICAL SCIENCE GRADE POINT AVERAGES FOR THE APPLICANT POOL

Grade Points	*Kansans*	*Non-Kansans*
3.90-4.00*	57 (14.8) †	31 (6.0)
3.80-3.89	19 (4.9)	17 (3.3)
3.70-3.79	26 (6.8)	27 (5.2)
3.60-3.69	24 (6.2)	16 (3.1)
3.50-3.59	16 (4.2)	24 (4.6)
3.40-3.49	15 (3.9)	24 (4.6)
3.30-3.39	21 (5.5)	38 (7.3)
3.20-3.29	35 (9.1)	40 (7.7)
3.10-3.19	19 (4.9)	42 (8.1)
3.00-3.09	31 (8.1)	48 (9.2)
2.90-2.99	18 (4.7)	26 (5.0)
2.80-2.89	23 (6.0)	45 (8.7)
2.70-2.79	21 (5.5)	27 (5.2)
2.60-2.69	17 (4.4)	25 (4.8)
2.50-2.59	5 (1.3)	15 (2.9)
2.40-2.49	4 (1.0)	16 (3.1)
2.30-2.39	8 (2.1)	17 (3.3)
2.20-2.29	7 (1.8)	14 (2.7)
2.10-2.19	9 (2.3)	3 (0.6)
2.00-2.09	7 (1.8)	10 (1.9)
1.90-1.99	2 (0.5)	5 (1.0)
1.80-1.89	0 (0.0)	6 (1.2)
1.70-1.79	1 (0.3)	2 (0.4)
1.60-1.69	0 (0.0)	1 (0.2)
	385‡	519‡

* 4.0 = A, 3.0 = B, 2.0 = C, 1.0 = D, 0.0 = F.

† Numbers in parentheses indicate percentage of the applicant pool.

‡ Numbers in columns do not include data from the total applicant pool because of transcripts arriving after the deadline, no transcripts received at all, etc.

The Medical College Admissions Test (MCAT) is a requirement for admission to the University of Kansas School of Medicine. This standardized examination is composed of four parts: verbal ability, quantitative ability, general information, and science. Percentile rankings are used at Kansas to determine the relative ranking of each applicant in each segment of the MCAT to the total number of applicants throughout the country. Kansans in our applicant pool received the following average percentile scores in the MCAT: verbal ability, 57; quantitative ability, 53; general information, 56; and science, 58 *(Table III)*. Non-resident applicants had average percentile rankings of 56 in verbal ability, 55 in quantitative ability, 55 in general information, and 57 in science. It can be seen that no significant differences exist between the Kansas and non-resident applicants in any of the percentile rankings of any of the four portions of MCAT. A percentile ranking of 99 is the highest score attainable. In the verbal ability portion of the MCAT, 6 Kansans and 20 non-Kansans scored at the 99th percentile. In the other portions of the MCAT, the Kansas applicant pool exhibited two applicants at the 99th percentile in quantitative ability, four in general information, and three in science. The non-resident pool showed 8 applicants at the 99th percentile in quantitative ability, 14 in general information, and 9 in the science portion.

Modal percentile intervals (that percentile interval in which the most applicants in the pool scored) were determined for both the Kansas and non-resident applicant pools in each of the four MCAT subtests. From *Table III* it can be seen that the two applicant pools have the same modal percentile interval for the quantitative ability and science portions of the MCAT. It is interesting to note that the modal percentile of the non-Kansans is the 95-99 percentile interval in the verbal ability subtest.

Further Medical College Admission Test data are presented in *Tables IV* and *V* for Kansans and non-Kansans, respectively. In the verbal ability portion of MCAT, about 6 per cent of the Kansas applicant pool scored at the 95th percentile or above, while 10 per cent of the non-residents had a similar ranking. Per-

TABLE III

MEDICAL COLLEGE ADMISSIONS TEST DATA FOR THE APPLICANT POOL

	Kansans				*Non-Kansans*			
	VERBAL ABILITY	QUANTITATIVE ABILITY	GENERAL INFORMATION	SCIENCE	VERBAL ABILITY	QUANTITATIVE ABILITY	GENERAL INFORMATION	SCIENCE
Mean percentiles	57.2	53.3	55.9	57.5	56.2	54.7	55.1	57.4
Applicants scoring at the 99th percentile.....	6	2	4	3	20	8	14	9
Modal percentile interval	70-74	45-49	70-74	70-74	95-99	45-49	85-89	70-74

TABLE IV

MEDICAL COLLEGE ADMISSIONS TEST DATA FOR THE KANSAS APPLICANT POOL

Percentiles	*Verbal Ability*	*Quantitative Ability*	*General Information*	*Science*
95-99	24 (6.3)*	21 (5.5)*	16 (4.2)*	15 (3.9)*
90-94	25 (6.5)	12 (3.1)	18 (4.7)	15 (3.9)
85-89	17 (4.4)	20 (5.2)	20 (5.2)	25 (6.5)
80-84	15 (3.9)	25 (6.5)	22 (5.7)	32 (8.4)
75-79	20 (5.2)	18 (4.7)	24 (6.3)	16 (4.2)
70-74	33 (8.6)	36 (9.4)	37 (9.7)	43 (11.2)
65-69	23 (6.0)	20 (5.2)	28 (7.3)	17 (4.4)
60-64	22 (5.7)	19 (5.0)	18 (4.7)	29 (7.6)
55-59	26 (6.8)	6 (1.6)	24 (6.3)	33 (8.6)
50-54	31 (8.1)	17 (4.4)	22 (5.7)	21 (5.5)
45-49	26 (6.8)	38 (9.9)	33 (8.6)	18 (4.7)
40-44	32 (8.4)	23 (6.0)	23 (6.0)	24 (6.3)
35-39	8 (2.1)	22 (5.7)	7 (1.8)	12 (3.1)
30-34	29 (7.6)	26 (6.8)	16 (4.2)	26 (6.8)
25-29	10 (2.6)	12 (3.1)	19 (5.0)	12 (3.1)
20-24	5 (1.3)	22 (5.7)	25 (6.5)	13 (3.4)
15-19	16 (4.2)	15 (3.9)	7 (1.8)	16 (4.2)
10-14	11 (2.9)	15 (3.9)	7 (1.8)	3 (0.8)
5- 9	7 (1.8)	9 (2.3)	12 (3.1)	5 (1.3)
0- 4	3 (0.8)	7 (1.8)	5 (1.3)	8 (2.1)
	383†			

* Numbers in parentheses indicate percentage of the applicant pool.

† Total numbers of students who took MCAT do not represent total applicant pool because scores were received after the deadline, scores were not sent to the school, applicant did not take MCAT, etc.

centile rankings in the quantitative ability subtests show that 5.5 per cent of the Kansans and 6.3 per cent of the non-residents had a 95th percentile or higher score. Over 7 per cent of the non-residents and about 4 per cent of the Kansans had at least a 95th percentile ranking on the general information segment of the examination. In the science portion of MCAT, over 5 per cent of the non-resident applicants and almost 4 per cent of the Kansas applicants scored at the 95th percentile or higher. Of the Kansas applicant pool, 39 per cent, 49 per cent, 40 per cent, and 36 per cent of the applicants scored below the 50th percentile in the verbal ability, quantitative ability, general information, and science portions of MCAT, respectively. Comparable data for non-resident applicants show that 40 per cent, 44 per cent, 43 per cent, and 37 per cent of the applicants scored below the 40th percentile in each of the MCAT subtests.

The undergraduate majors of our applicant pool are summarized in *Table VI*. From this, it can be seen that almost 33 per cent of our applicants had a general biology major. The major for the next highest number of applicants was chemistry, with 125. A pre-medical major was chosen by the third highest number of applicants (89), followed by psychology (74). The biological and physical sciences together accounted for approximately 63 per cent of the total applicant pool. It is quite evident that our applicant pool is diversified, with 53 majors represented.

The occupation of the applicant's father is categorized in *Table VII*. The largest number of our applicants (138) have fathers who are business executives. Applicants with fathers who are physicians numbered 119, and 113 of our applicants indicated that their father was a business owner or proprietor. Next in frequency were the occupations of skilled trades, 82; business salesman or buyer, 66; engineer, 55; and farmer or rancher, 46. It is of some interest that 144 of our applicants did not categorize their fathers' occupation into one of the possible 40 choices listed.

TABLE V

MEDICAL COLLEGE ADMISSIONS TEST DATA FOR THE NON-KANSAS APPLICANT POOL

Percentiles	*Verbal Ability*	*Quantitative Ability*	*General Information*	*Science*
95-99	56 (10.0)*	35 (6.3)*	43 (7.7)*	32 (5.7)*
90-94	27 (4.8)	22 (3.9)	37 (6.6)	31 (5.5)
85-89	31 (5.5)	32 (5.7)	47 (8.4)	43 (7.7)
80-84	31 (5.5)	41 (7.3)	28 (5.0)	53 (9.5)
75-79	34 (6.1)	27 (4.8)	31 (5.5)	16 (2.9)
70-74	42 (7.5)	52 (9.3)	28 (5.0)	64 (11.4)
65-69	36 (6.4)	33 (5.9)	31 (5.5)	25 (4.5)
60-64	25 (4.5)	32 (5.7)	16 (2.9)	36 (6.4)
55-59	23 (4.1)	11 (2.0)	29 (5.2)	25 (4.5)
50-54	33 (5.9)	29 (5.2)	28 (5.0)	26 (4.6)
45-49	18 (3.2)	42 (7.5)	29 (5.2)	20 (3.6)
40-44	35 (6.3)	34 (6.1)	31 (5.5)	31 (5.5)
35-39	8 (1.4)	24 (4.3)	23 (4.1)	18 (3.2)
30-34	29 (5.2)	27 (4.8)	26 (4.6)	30 (5.4)
25-29	29 (5.2)	21 (3.8)	11 (2.0)	18 (3.2)
20-24	23 (4.1)	21 (3.8)	39 (7.0)	14 (2.5)
15-19	26 (4.6)	19 (3.4)	15 (2.7)	28 (4.6)
10-14	20 (3.6)	17 (3.0)	20 (3.6)	18 (3.2)
5- 9	19 (3.4)	20 (3.6)	25 (4.5)	13 (2.3)
0- 4	15 (2.7)	21 (3.8)	23 (4.1)	21 (3.8)
	560†			

* Numbers in parentheses indicate percentage of the applicant pool.

† Total numbers of students who took MCAT do not represent total applicant pool because scores were received after the deadline, scores were not sent to the school, applicant did not take MCAT, etc.

Summary

From the academic and demographic data presented, it can be concluded that our total applicant pool is composed of students with varying academic credentials and abilities. Our applicant pool reflects citizens of almost every state in this country, many institutions of higher learning throughout the world, and varied home backgrounds. The Kansas applicants represented almost two thirds of the counties in this state, and have pursued diversified majors in many colleges and universities. It is from these highly diversified and qualified applicants that our future physicians will emerge.

(Continued on next page)

MOVING?

When you change your address, be sure to notify the JOURNAL, preferably one month in advance. In that way, you'll get every issue on time. Simply print your name, old address, and new address, on a postal card and send to: THE JOURNAL OF THE KANSAS MEDICAL SOCIETY, 1300 Topeka Avenue, Topeka, Kansas 66612.

TABLE VI

UNDERGRADUATE COLLEGE MAJORS FOR THE TOTAL APPLICANT POOL

College Major	*Number of Applicants*
Arts and Humanities	
Architecture	1
English (literature)	15
Fine arts	1
History	7
Language	7
Music	4
Philosophy	11
Speech and drama	1
Theology	1
Other	7
Biological Sciences	
Biology (general)	327
Biochemistry	25
Biophysics	1
Botany	1
Zoology	53
Other	65
Business	
Accounting	2
Business administration	1
Engineering	
Aeronautical	3
Civil	2
Chemical	3
Electrical	9
Industrial	1
Mechanical	7
Other	6
Physical Science	
Chemistry	125
Earth science	2
Mathematics	10
Physics	9
Other	9
Professional	
Health technology (medical, dental, laboratory)	7
Nursing	6
Pharmacy	24
Prelaw	1
Premedical	89
Preveterinary	1
Therapy (occupational, physical, speech)	7
Other	6
Social Science	
Anthropology	5
Economics	1
Education	7
History	4
Political science	13
Psychology	74
Social work	2
Sociology	9
Other	5
Other Fields	
Agriculture	1
Communications	1
Home economics	2
Military science	1
Physical education and recreation	1
Other	12

TABLE VII

FATHER'S OCCUPATION FOR THE TOTAL APPLICANT POOL

Occupation of Father	*Number of Applicants*
Business executive	138
Physician	119
Business owner or proprietor	113
Skilled trades	82
Business salesman or buyer	66
Engineer	59
Farmer or rancher	46
Lawyer	27
Accountant	23
College teacher	22
Business (clerical)	16
Dentist	16
Military service	15
Pharmacist	15
Scientific researcher	11
Clergyman (ministry priest)	9
School principal or superintendent	9
Teacher (secondary)	9
Optometrist	7
Writer or journalist	6
Veterinarian	6
Law enforcement officer	5
Artist	3
Teacher (elementary)	3
Clinical psychologist	2
Computer programmer	2
Conservationist or forester	2
Interior decorator	2
Laboratory technician or hygienist	2
School counselor	2
Therapist (physical, occupational, speech)	2
Architect	1
Clergy (other religions)	1
Dietician	1
Foreign service worker	1
Nurse	1
Social worker	1
Statistician	1
Other	144

Professional Liability

Legislative Change Needed to Stem Current Medical Malpractice Crisis

WESLEY H. SOWERS, ***Topeka***

MEDICAL MALPRACTICE crisis is a recent occurrence.

In 1965, the number of verdicts awarded in excess of $300,000 was so small as to go almost unnoticed. In California, 34 awards over $300,000 were recorded in 1974. The first million-dollar malpractice award occurred in 1968.

Since then, about 30 verdicts have occurred. The number of malpractice suits in 1974 was 70 per cent higher than in 1973, and the average size of awards increased 20 per cent. One major insurance underwriter estimates that 10 per cent of American doctors have a malpractice claim pending against them.

Although there has been a dramatic increase in malpractice claims, the issue goes beyond the number of claims and size of awards. The effect of the rising volume of claims is being felt in increased health care costs, health manpower problems, and further deterioration of the physician-patient relationship. These developments are the stimuli for state policy change.

First, Kansas must provide an atmosphere to assure its citizens the services of the finest health care providers. We cannot afford for our finest physicians to leave the state or seek early retirement because of unavailability or excessively high cost medical malpractice insurance.

While the medical profession should not be shackled with fear of economic disaster for competent professional performance, Kansans must not be deprived of a proper remedy for a wrong that causes damage. Yet, in this analysis, one must consider . . . *"How much protection can the public afford?"* Whether it is calling in two additional doctors to confirm the opinion of one, or subsidizing an insurance premium by way of funds, or pools, it is still the public who picks up the tab.

There is not any one solution. The legal profession, the medical profession, and the insurance industry must each diminish its demands for any broad based public effect.

There is one thing that everyone agrees to. That is, *some type of legislative change is needed now*—change that is designed to benefit Kansans as purchasers of health care services.

Judicial Expansion Blamed

Judicial expansion of particular legal doctrines is also frequently blamed for the increase in malpractice litigation. Some courts now hold that a physician must not only be able to exercise the level of knowledge and skill prevalent among medical providers in his community, but must also perform up to accepted national standards of practice. Indeed, some jurisdictions have abandoned the "locality rule" entirely. Courts in many areas have also made it possible to demonstrate the physician's liability without the level of proof required in other forms of litigation. Higher levels of patient "consent" are also being required before a procedure is judged to have been voluntarily agreed to. In addition, the judiciary seems to have expanded the doctrine of negligence to include damages for results that are merely unsatisfactory to a patient and further to have glossed over its responsibility for maintaining attorney's fees at a reasonable level.

Specialization Lessens Empathy

The once close relationship between physicians and patients has come under new strains. A 1973 survey for the HEW commission concluded that "respondents view the doctor-patient relationship . . . today much less favorably than . . . 20 years ago." The decline of general practice and the increased specialization of medical professionals may have produced changes which lessen the friendliness and empathy involved in a physician-patient relationship. For whatever reason, people are less personally involved with their physician, and perhaps more willing to press a legal claim against him.

Also frequently cited as a medical cause of the malpractice claims increase are the advances in medical science creating more intricate and complex procedures of patient treatment. Although these procedures may be used to treat illnesses once regarded as hopeless, their complexity provides greater opportunity for mistakes or unsatisfactory results and resultant lawsuits.

The practice of medicine will always involve the risk

Senator, 31st District of Kansas; Chairman, Public Health and Welfare Interim Legislative Committee.

Reprinted from *Insight,* October, 1975, published by the Wichita Area Association of Commerce and Industry.

of patient injury. Thus, many malpractice claimants may have suffered medical injuries not caused by physician negligence. However, there is little question that some physicians are incompetent and should not be allowed to practice. The HEW commission concluded that most states do not have adequate mechanisms to deal with the incompetent physician. The commission states, "The law in most States permits conduct which, although it may not be criminal, nevertheless may result in needless harm to the patient and consequently lead to malpractice litigation."

"Miracle Cures" Erroneous

Accounts, both factual and fictional, of medicine's ability to produce "miracle cures" have erroneously created a belief among some that virtually all physical problems may be successfully treated. Thus, when a treatment fails, the patient or his family may unfairly blame the practitioner rather than the nature of the illness. Those relatively few instances of million-dollar settlements have been granted wide public exposure through the media; yet most malpractice suits are decided in favor of the defendant and no award is given. Results favorable to the defendants are seldom widely publicized. Thus, the impression may be created that large awards are far more common than is actually the case. This, in turn, may tend to encourage still more suits and further aggravate the problem.

Public resentment of the high cost of medical care is also frequently listed as a contributor to the malpractice crisis. Medical costs have greatly increased over the last few years for many reasons that are unrelated to the behavior of individual practitioners. Yet the impression of great physician wealth in a time of increasing cost of individual care may produce an attitude conducive to malpractice actions.

Many argue that our society is simply more litigious than ever before. Even if medical negligence or malpractice is not increasing, people are now more aware of their rights and more willing to seek redress through the judicial system. Legal claims of all kinds, not just malpractice claims, are at an all-time high.

Interim Committee Study

In an effort to alleviate medical malpractice insurance problems as they exist in Kansas, an interim committee of the Kansas legislature has been studying the matter for the past several months. While final conclusions have not yet been reached, the reasoning of the Committee can be deducted from the following tentative recommendations (presented in summary form), which, if finally adopted, will be submitted to the entire legislature in the 1976 session.

A 1975 statute provides for details of all medical malpractice settlements to be submitted to the state Insurance Commissioner. Identities are not to be revealed. The Committee recommendation would require that all such data be promptly given to the Board of Healing Arts for its use in connection with licensing or revoking of licenses of health care providers. This should aid materially in weeding out substandard practitioners.

The statute of limitations is a law that determines the time within which a suit must be filed against an alleged wrongdoer. The Committee recommendation is that the period of time for filing medical malpractice suits should be reduced to six years, except for infants who would have until age 8. This is about one half the period presently applicable.

The Committee recommends that there be no reference to specific dollar amounts of requested damages in the initial filing of a medical malpractice suit. It is hoped that this will reduce the tendency to file non-meritorious suits that may be based on an illusion of high monetary recovery.

Screening Panel Recommended

A Committee recommendation of a provision for a judge to have the right to appoint a screening panel in medical malpractice cases, with the findings of the panel not admissible in subsequent court proceedings and panel members barred from testifying in such proceedings has been tentatively adopted. Purpose of the panel would be to effect quick, low-cost settlements, and to identify non-meritorious cases. The panel would not be a bar to customary court actions.

Presently there seems to be a fear of reprisal suits against those who may give testimony to the Board of Healing Arts or review panels, and who may be sued as a result of suspension or revocation of a license to practice. The Committee proposes to grant immunity from civil suit for those who give such information in good faith. This should facilitate the free flow of information pertinent to determining qualifications for practicing as a health care provider.

A requirement for specified continuing education seems desirable to maintain high standards of health care. The Committee may propose to require such education as a prerequisite to licensure.

Attorney Fees Evaluated

There is widespread criticism in many cases, unjustified, of the excessive amount of attorney's fees, in medical malpractice cases with the result that the patient receives too little of the damages awarded. The Committee feels that judges should be required to evaluate such fees to require that they be reasonable. A statutory

(Continued on page 313)

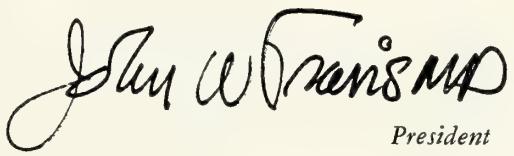
A Christmas Message

Dear Colleagues:

I want to share with you this Holiday thought which has been passed down through my family for several generations:

Let us thank God that the inspiration of one Man is still—and will remain—greater than the collective wisdom of all men. Amen.

Fraternally,



President

Merry Christmas from your Officers and Staff!

John N. Blank, M.D.
Val Braun
George E. Burket, Jr., M.D.
Edward G. Campbell, M.D.
Gary Caruthers
Clair C. Conard, M.D.
Oliver E. Ebel
Roxanne Emmert
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John D. Huff, M.D.
Warren E. Meyer, M.D.
Lew W. Purinton, M.D.
Alex Scott, M.D.
Jerry Slaughter
June Stratton
John W. Travis, M.D.
Velma White
Emerson D. Yoder, M.D.



Editorial COMMENT

The Failing Physician

The fact that some members of the medical profession are unable to function adequately because of behavioral aberrations is not new. The fact that the profession is finally recognizing the need to provide effective assistance to these individuals *is* new, and while this implies a greater awareness and sense of responsibility on the part of the profession, it should also be noted that it is in part a response to the social tumult of the day. Physicians whose capabilities, either technical or judgmental, have been impaired by the inevitable stresses on mind or body or by the abuse of drugs, have been part of the total medical scene for all time. That the profession is only now coming to grips with the problem admits of some degree of abdication of responsibility in the past, but derives also from the unique position of the physician in society.

The profession's delay in facing the problem stems in part from some inherent features of the matter, notably the difficulty in identification—identification of the actual or incipient subject as well as the nature of the condition. Initially, there is the obscuring fact that such disabilities often originate in extensions of socially acceptable behavior and the changes are masked by the mores. The usual concept of the disabled physician relates to the abuse of some drug, but this is chiefly because such cases are easier to identify since the addiction can rarely be carried forward to a significant degree without some external recognition. But there are other forms of disability—the eccentric or unorthodox practitioner who departs from the usual standards of practice, but whose transgressions are not quite severe enough to prompt official action until after some tragedy. Or the aging physician whose ability and judgment are no longer dependable, the respected—even beloved—physician whom patients and colleagues are reluctant to dismiss—or know not how to dismiss—even as they see the increasing risk. Or the driven status-seeker, addicted not pharmacologically but emotionally to a compulsive need to have the biggest or most lucrative practice, until exhaustion disrupts the function one way or another.

Who can call official attention to the potentially crippled physician before the overt damage is obvious—either to the person or the practice? How do we foresee or gauge the combination of stresses which will be manifested eventually in a destructive habituation, addiction, or over-extension? Our willingness to look the other way plus this difficulty in identification account for a long latent period, even after the individual may be overtly affected, before the situation reaches a severity that permits our current regulations of professional function or hospital activity to intervene. It is an awesome thing to sit in judgment of a colleague, and it is not only the "there-but-by-the-grace-of-God" attitude that delays action but the very real possibility that, if it is not properly based and documented, the intervention and the intervenors may be faced with legal action.

As an individual, the physician is probably no more worthy of salvage than any other individual—except for one thing: the essential nature of the physician's service and the fact that failure risks the health or life of the patient. It is this point which, regardless of misguided compassion or professional self-interest, demands that the profession take action, for it is in this regard that the public will act if the profession does not.

Identification of the failing physician does not, of course, solve the problem. There must be effective disposition. If disability reaches the point of action by civil authorities, the matter may be simplified for the professional group, since it will need only to apply the established rules of membership or licensing to the civil action. This is easier because it permits an impersonal execution of the rules, but it actually points up the prior failure of the group which seems to have such difficulty in bringing to its own members the benefits it offers to others as a matter of course and obligation.

The available dispositions range from censure through restriction and suspension to dismissal. The milder actions, usually applied in accordance with the estimated severity of the problem, are presumed to carry an element of rehabilitation but in fact are primarily punitive

and depend, for any salutary effect, not upon the group which has perpetrated them, but upon the individual who is expected to respond as to some social miracle drug and return to mental and professional health. This is a manifestation of the same attitude which delayed the identification, and of the discomfort the colleagues feel in confronting the individual. Early in the process, there is an effort to seek evasive solutions. This is why these individuals often have a history of removal from one area to another. (How can we get him—or her—to go somewhere else—or into a low-risk service?) Thus, the official disposition tends to lag behind the severity of the matter because of this denial and evasiveness on both sides. This is understandable for all the reasons mentioned but unfortunate, because, as in any illness with any patient, it is early in the process that the best hope of recovery exists. The physician, reading some degree of volition into the addicted colleague's plight, reacts with ambivalence—compassion for the agony, regret at the wasted talent, but anger at being confronted by the tarnished professional image, the necessity to choose between uneasy disregard, uncertain involvement.

Ultimately, there can be only one of two dispositions —destruction of the patient professionally and probably physically—or salvage and rehabilitation, depending upon the individual capacity and adaptation to a suitable professional function, and the effectiveness of the professional effort, both in therapy and in corporate support and guidance.

It is a formidable order on both sides.—*D.E.G.*

Professional Liability

(Continued from page 310)

change may be recommended to accomplish this.

The collateral source rule used by the court, to exclude evidence of compensation to which the plaintiff may be entitled exclusive of the amount sought in a medical malpractice suit, would be modified according to a Committee recommendation, to exclude only those amounts that come from privately purchased insurance. It is believed that this change would provide a jury with better information on which to base an award for damages.

The Committee recommends that damages for pain and suffering should be limited to $25,000; presently there is no limit. Also, there would be no change in the present law as to total damages. Presently there is no maximum on the amount of damages which may be recovered.

The foregoing recommendations, which are subject to revocation or change, plus others should be a substantial aid in encouraging insurance companies to make medical malpractice insurance available and at reasonable cost—but it should be borne in mind that there is no positive assurance that the degree of improvement necessary to maintain quality health care services on a readily available basis, and to avoid rising costs attributable to medical malpractice insurance, has been achieved. Unless such assurances can be developed, it is my opinion that other steps must be taken, such as establishment of a state operated patient compensation fund (similar to that provided recently in the state of Indiana) supported by assessments on health care providers. Such a fund could be set up to assure adequate insurance coverage for health care providers, and would not use state funds. By so doing, Kansas citizens could have assurance of a continuation of quality health care services—services that our legislature must cooperate in providing.

NEW MEMBERS

The JOURNAL *takes this opportunity to welcome these new members into the Kansas Medical Society.*

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Wichita, KS 67214

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Letters to VOX DOX should be addressed to the Vox Dox Editor. Journal of the Kansas Medical Society, 1300 Topeka Avenue. Topeka, Kansas 66612.

Guest Editorial

Motherhood and Apple Pie

RICHARD C. HEDGES, M.D.

Have you ever been asked, "How can you be against motherhood and apple pie?" Perhaps it's time we, as physicians, started being against things that so deeply affect us as physicians as well as tax payers. The sanctity of motherhood went out the window with abortions on demand, and we all preach against apple pie for our overweight patients. In other words, as far as I'm concerned, old taboos are fair game.

Many of us for too long have been reluctant to speak out against the ever increasing health crisis "cures" being thrown together and literally shoved down our throats. It's always said if we come out against any of the programs it will place organized medicine in a negative position or that it will give the bureaucrats more motivation for yelling, "self interest."

The AMA's recent successful lawsuit against HEW was truly a breath of fresh air!

The HMO concept has recently arrived in our area. To my knowledge, no organized medical group in the area has spoken out against it. When I made personal inquiry about it, I was told it is simply another form of health care delivery, and it was being watched through information handed out through its *Marketing Director!*

By the time a few of us north of the river became concerned, MACHPA had already given its endorsement, and it would have been home free simply by a rubber stamp from the Mid America Regional Council (MARC), but here the worm turned. Judge Henry J. Miller, Presiding Judge of Platte County, obtained a delay and is working on a complete turn down by MARC because he took the time to read the Community Group Health Plan (CGHP) grant application, including its budget.

Please, for a few moments, stop thinking as physicians and put on your other hat—the big taxpayer. Presumably, if MARC gives its approval, funds will start to flow—$850,000 the first year with reputed plans for $1.5 million the second year. I do not intend to relate the entire budget, but please suffer with me for a few dry, but eye opening, figures. The following figures are on an annual salary rate:

Executive Director	$35,000.00
Marketing Director	25,000.00
Finance Director	20,000.00
Enrollment Manager	18,000.00
Enrollment Representative	15,000.00
Administrative Assistant	12,000.00
Bookkeeper	10,000.00
Four secretaries, each	7,200.00
Clinic Manager	20,000.00
Two Registered Nurses, each	10,000.00
One Licensed Practical Nurse	8,000.00
Three nurses aides, each	6,000.00
Four laboratory and/or X-ray technicians, each	9,000.00
Two appointment/telephone clerks, each	6,000.00
Two clerks, each	6,000.00
Fringe benefits, physician's rate	22 percent
Fringe benefits, non-physician's rate	18 percent
Advertising budget	over $60,000.00

Had enough? Would you believe this, and more, is all required for three budgeted physicians; one medical director at $55,000.00 and two primary care physicians at $40,000.00 each. How about that for an astounding administrative/doctor ratio with an unbelievably high administrative payroll?

I was always under the impression that HMO's were developed to meet health care needs where the present fee-for-service system had failed, and to reduce costs. The CGHP epicenter is to be State Line Road and I-435. Not exactly a low rent district! Its application states it plans to make a "rifle shot" approach to enrollment, aiming at the following groups. I quote:

Younger persons, 21 to 35 years
Married couples
Small families
Persons with medium family incomes, $8,000 to $25,000
Higher paid (implying higher benefits) blue collar workers and junior management
Persons with residences close to health center

Dr. Hedges, Excelsior Springs, Missouri is President of the Clay County Medical Association.

Decision makers within a family
Decision makers impacting on families
..... unquote.

This could go on forever, so I will close with the following observations. The evidence to date indicates that more than 50 percent of HMO's fail after Federal funds are withdrawn from their support budget. Enrollment has been low since most people state they are satisfied with their present health care coverage. And finally, I quote from a special article in the *New England Journal of Medicine,* "Impact of Membership in an Enrolled, Prepaid Population on Utilization of Health Services in a Group Practice,"

"Results showed that prepayment alone resulted in significant increases in both inpatient and ambulatory care (about 100% in ambulatory care visits, 75% in hospital discharges, and 60% in hospital days). These increases were far greater than comparable increases in the fee-for-service population served by the clinic." *(New England Journal of Medicine,* 292:780-783, 1975).

Now, put your physician's hat on top of your taxpayer's hat and think about it!

Case Reports

(Continued from page 293)

FAMILIAL EXOSTOSIS

Osteocartilaginous exostosis is not new. It was first reported as early as 1814 by Boyer. While not a rare tumor in individuals, it is not frequently reported as a family matter. This case report presents one male patient, his family placement, and his social and medical difficulties.

The patient is now 41 years old. He has been followed in our office since he was 15 years of age. The manifestations of the disease in the family have been limited to the maternal side, the mother having it herself; none of her three sisters or a brother did have the disease. By a previous marriage, she had three sons, two of whom showed exostoses. The patient has four brothers, of whom one shows the disease, and two sisters, of whom one also shows exostoses. This sister also has a daughter (the patient's niece) who has the disease.

The exostoses in our patient are widespread, involving the trunk and all four extremities.

He first came to this office to have osteomas removed from his fingers, a bit later from his right leg, right knee, and chest; then, the left leg. Moving of tendons over any of the bony exostoses caused pain. His work was mostly manual labor, and because of the physical limitations caused by this condition, he was disabled at an early age. Nevertheless, he continued to work. He sustained burns of the face and extremities from steam and hot tar, a hernia from one job, stickers in his fingers, and repeated pains and sprains on the job from vehicular accidents. Since 1960, he has been on Social Security for total disability.

Aside from his rather grotesque appearance and the frequent minor ailments developing from the condition, the patient has in the past five years developed bronchitis, pleurisy, and arteriosclerotic heart disease. He has also acquired alcoholic tendencies, and frequently suffers breathing difficulties when inebriated. Short-term hospitalization, which offers treatment and fine care plus good diet, is frequent and allows the patient to return to his normal activities.

In 1972, the patient had eight hospital admissions, mostly concerned with a recurring right leg thrombophlebitis associated with a non-healing wound. The bronchial condition seemed progressively worse.

During 1973, he had 20 short-term admissions to the local hospital. His troubles have focused on thrombophlebitis of the left leg, acute bronchitis with severe dyspnea, and emphysema. Occasionally, when exostoses became prominent and painful they were excised. This occurred once this year. In May 1975, the patient suffered from urinary retention, requiring transurethral prostatectomy. He recovered well and has had no other urinary problems.

According to Berou, *et al.,* the exostotic disease appears as a dominant hereditary character in the autosomal transmission, preeminent in males. Jeffe, in 1943, detailed a description of multiple exostoses. In his writing, Louis Lichtenstein indicates that these bony tumors are usually not the cause of serious disability and cause only occasional discomfort. He indicates that most surgical excision is before the age of 15.

Our own findngs have been almost opposite. Our patient has experienced much pain since age 15, with multiple excisions even in the last year.

Roscoe F. Morton, M.D., Arkansas City

Official Proceedings

1975 Fall Meeting of the House of Delegates

The Fall Session of the House of Delegates of the Kansas Medical Society was instituted principally to work on matters of legislative interest and for such emergency resolutions as might appear.

The resolutions presented to this House of Delegates are printed in numerical order under the minutes of the Second Session.

FIRST SESSION

The first meeting of the House of Delegates was called to order by the Speaker, Dr. Clair C. Conard, at 9:15 a.m. on Sunday, November 16, 1975, at the Hilton Inn, Wichita.

Dr. John W. Travis, President, reviewed some of the activities in which the Kansas Medical Society has been involved since May.

In the area of P.L.93-641 (Health Service Areas), the new HEW Secretary, David Mathews, had written to the governors that he will give consideration to their recommendations concerning Health Service Areas and Health Systems Agencies. Dr. Travis indicated he will again approach Governor Bennett, to reconsider the inclusion of Wyandotte, Johnson, and Leavenworth counties into a Kansas Health Service Area.

On the subject of the Relative Value Study, it was pointed out that the Justice Department has a lawsuit pending against the American Society of Anesthesiologists.

With reference to professional liability legislation, Dr. Travis announced that a special House of Delegates meeting may be called in January.

It was announced that the Board of Directors of KaMPAC has been reorganized, and more emphasis will now be put on state legislative and executive races, rather than on national races.

Newman V. Treger, M.D., Chairman, Blue Shield Affairs Committee, presented a prepared report and the summary of the 1976 Blue Cross-Blue Shield Planning Document.

Dan Roberts, M.D., substituting for Dr. Gregg Snyder, presented the following report on the activities of the Commission on Professional Liability:

Item	*KMS Recommendations*	*Interim Committee Recommendation*
Statute of Limitations	2 years from occurrence (includes minors as well as adults).	2 years, but period shall not extend more than 4 years beyond occurrence; for minors: period shall not exceed 8 years beyond occurrence.
Limitation of Awards	$500,000 limit on awards.	No limit on general awards; however $25,000 limit on pain and suffering awards.
Limitation of Individual Liability	$100,000 limit per insured.	No limit recommended.
Patients Compensation Fund	Fund maintained by surcharge (not to exceed 10%) against providers' basic premiums; administered by insurance commissioner; allows for periodic payments.	Establishes health care stabilization fund; maintained by surcharges (between 40 to 65%); administered by insurance commissioner; voluntary participation; provides that all insurance policies are "claims made."
Screening Panels	Mandatory, pre-trial panels of 3 providers; findings admissible; panelists obligated to testify as expert witness if called.	Panels composed of providers and attorneys; findings not admissible; panelists prohibited from testifying in future actions; panels are court-appointed and are not mandatory.
Arbitration	Allows voluntary/binding agreements to arbitrate future or existing controversies.	No recommended change in present status of law.
Joint Underwriting Association	Temporary JUA authority authorized; available to physicians refused insurance by the carriers; all companies who write liability insurance of any kind would be included in JUA.	Establishes JUA composed of all liability insurance companies; any losses covered by stabilization fund; administered by insurance commissioner; will write 100/300 "claims made" policies.
Ad Damnum Clause	Eliminate *ad damnum* clause.	Eliminate *ad damnum* clause.
Collateral Source Rule	All reimbursements or payments admissible.	Only those sources of payment not paid for by the claimant or his employer are admissible; excludes SS, Medicaid, Medicare.

Item	*KMS Recommendations*	*Interim Committee Recommendation*
Breach of Contract	Claimant not able to proceed on theory that contract of "good result" breached unless specifically set forth in writing.	No recommended change in present status of law.
Res Ipsa Loquitur	Tightens application of doctrine to only most obvious cases; and court may require expert testimony even so.	No recommended change in present status of law.
Informed Consent	No liability on theory of informed consent if patient signs certain document (except in case of misrepresentation of facts).	No recommended change in present status of law.
Reporting of Claims	All claims reported to insurance commissioner; then to licensing authority.	All claims reported to insurance commissioner; then to licensing authority.
Application of "Good Samaritan Act"	Expands Good Samaritan Act to exempt providers from liability when rendering emergency care in hospitals and elsewhere except where gross negligence exists.	No recommended change in present status of law.
Attorney's Fees	Establishes "sliding scale" limit on contingent fee that can be charged.	Provides that the judge shall approve fees of attorneys prior to disposition of suit; places no limit on fees.
Study Commission	Establishes ongoing "Medical Malpractice Study Commission."	No recommendation.
Punitive Damages	Providers shall not be liable for punitive damages.	No recommended change in present status of law.

The Speaker next announced the composition of the Reference Committee as follows: Drs. F. Calvin Bigler, Garden City, Chairman; Dean Collins, Topeka; Donald D. Goering, Salina; Robert P. Hudson, Kansas City; Willard J. Kiser, Wichita. After assigning numbers to the resolutions, the meeting was turned over to the Reference Committee.

SECOND SESSION

After lunch, the House of Delegates reconvened for its second session.

Dr. Conard announced that 110 voting members of the House of Delegates had registered, and declared that the official quorum was present.

The House then proceeded to consider the following resolutions, after which the meeting was adjourned at 4:00 p.m.

RESOLUTION NO. 75F-1

Neurology

WHEREAS, The Neurologists of Kansas wish to be recognized as a component organized specialty section of the Kansas Medical Society; therefore be it

Resolved, That the By-Laws be amended by adding Section 4.58, 17, "The Kansas Neurological Society."

RESOLUTION NO. 75F-2

Section on Nuclear Medicine

WHEREAS, The nuclear physicians of Kansas wish to be recognized as a component organized specialty society of the Kansas Medical Society; therefore be it

Resolved, That the By-Laws be amended to add Section 4.58, 18 the "Section on Nuclear Medicine."

RESOLUTION NO. 75F-3

Grievance Committee

WHEREAS, In this climate of concern regarding medical liability it seems appropriate that the individual county medical society should be able to perform at a grass roots level a more effective job with its members of handling grievances from the community; therefore be it

Resolved, That the Executive Committee seek legal advice and appropriately work for legislation such that the members of any committee of the Kansas Medical Society acting in the capacity of a grievance committee or board of censors be protected from liability and action when acting without malice and in the reasonable belief that the action taken by them is warranted.

RESOLUTION NO. 75F-4

Certificate of Need Legislation

WHEREAS, The passage of the National Health Planning and Resources Development Act of 1974 (P.L.93-

641) will necessitate revision or replacement of present Kansas planning and certificate of need laws; and

WHEREAS, P.L.93-641 mandates in Section 1513 (a) (4) that one of the functions of the health systems agencies will be "preventing unnecessary duplication of health resources . . ."; and

WHEREAS, The intent of P.L.93-641 is to strengthen the health care system and improve accessibility of all patients to quality health care at reasonable cost; and

WHEREAS, Freedom of choice of patient for physician and preservation of individual doctor-patient relationships are indispensable in the health care system; therefore be it

Resolved, That the offices of physicians in the private and consultative practice of medicine be excluded from the definition of a health care facility requiring certificate of need in the new or revised Kansas certificate of need legislation; and be it further

Resolved, That the Kansas Medical Society, through the Kansas Chapter of the American College of Radiology, offer expert advice to all groups or government agencies charged with planning regional guidelines concerning health facilities which contain radiant energy equipment; and be it further

Resolved, That these resolutions be forwarded to the Governor of Kansas, the Kansas Legislature, and the Kansas Department of Health and Environment.

RESOLUTION NO. 75F-5

HSA

(Not adopted. Held over for May.)

WHEREAS, Public Law 93-641 fixes HSA as the planning body for health care; and

WHEREAS, HSA By-laws incorporates that HSA will cooperate and aid in implementation of the programs of national interest as HEW may direct; therefore be it

Resolved, That KMS house of delegates work for repeal of this law; and be it further

Resolved, That the KMS inform all physicians of the provisions of this law, as it seems to make it possible that this is all HEW needs to control all persons and institutions associated with health care.

RESOLUTION NO. 75F-6

Not adopted.

RESOLUTION NO. 75F-7

Not adopted.

SUBSTITUTE RESOLUTION NO. 75F-8

Provision of Legal Council for the Board of Healing Arts

Resolved, That the Kansas Medical Society encourage the legislature to act as necessary to provide legal counsel and legal defense for the Kansas State Board of Healing Art's actions in carrying out the intents of the Healing Arts Act.

RESOLUTION NO. 75F-9

Disabled Physicians Act

WHEREAS, The American Medical Association has prepared a draft proposal of model legislation for a Disabled Physicians Act: Restriction, Suspension, or Revocation of Licensure; and

WHEREAS, During this current climate of concern for medical liability, it is often asked: What does the medical profession do to police its own profession; and

WHEREAS, The Kansas State Board of Healing Arts does not have adequate administrative means at its disposal to determine fitness to continue practice, either generally or on a limited basis; therefore be it

Resolved, That the Kansas Medical Society supports the enactment of a Disabled Physicians Act for the state of Kansas.

RESOLUTION NO. 75F-10

Psychiatric Residency Training Program

Resolved, That the Kansas Medical Society convey their support to the Kansas Legislature for psychiatric residency programs at three locations for training in Kansas: Kansas City, Wichita, and Topeka.

RESOLUTION NO. 75F-11

Professional Liability Insurance

WHEREAS, The professional liability problem affecting physicians in Kansas and throughout the United States has reached epidemic proportions; and

WHEREAS, The unavailability of professional liability insurance at reasonable rates has forced some physicians to establish their practices outside the state of Kansas, others to take early retirement, and some physicians to risk the practice of medicine without insurance; and

WHEREAS, The cost of medical care has been increased significantly from the past through the increased premium rates; and

WHEREAS, It has been suggested that a possible solu-

tion to the existing problem would be the abandonment of professional liability coverage by the practicing physician, thus serving to dry up the pool of monies now available; and

WHEREAS, This type of action could possibly remove the physician as a target for professional liability claims; therefore be it

Resolved, That the House of Delegates of the Kansas Medical Society direct its legal counsel to review all related statutes and laws affecting this type of action and submit to this House at its annual meeting in May 1976, a detailed report outlining the pros and cons of abandonment of professional liability coverage and the various mechanisms available to accomplish same.

RESOLUTION NO. 75F-12

Continuing Medical Education

WHEREAS, The Kansas Medical Society has adopted continuing medical education requirements for continued membership in the Society; and

WHEREAS, The continuing medical education requirements of the Kansas Medical Society can be fulfilled equally by members and non-members of the Kansas Medical Society; and

WHEREAS, Any additional system developed to implement continuing medical education requirements for re-licensure would produce unnecessary paperwork and reporting procedures; therefore be it

Resolved, That the Kansas Medical Society request the Kansas State Board of Healing Arts to adopt and accept the continuing medical education requirements as certified by the Kansas Medical Society as a requisite for continued licensure in Kansas; and be it further

Resolved, That copies of this resolution be forwarded to the Kansas State Board of Healing Arts and to the Special Legislative Committee on Malpractice.

RESOLUTION NO. 75F-13

Medical Housecleaning

WHEREAS, The medical profession is widely, and with some justification, criticized for inadequate supervision of members of its profession whose work is not of adequate standards, as evidenced by comments from such sources as Senator Kennedy criticizing the American Medical Association President, Malcolm Todd, on this issue; statements of Kansas Insurance Commissioner Bell as carried in many newspapers, criticizing the lack of adequate housecleaning of the medical profession as a requisite to obtaining relief for malpractice; as expressed by members of Senator Sowers' legislative committee on malpractice; as listed in the primary recommendations of the Bar Association; as voiced by concerned members of the Kansas Medical Society; as declared by the Michigan Malpractice Crisis Committee to be the number one priority to be acted upon before obtaining public support for their malpractice problems; therefore be it

Resolved, That the Kansas Medical Society:

1. More vigorously review the present status of House Bill 2008, to insure that its contemplated changes are satisfactory and to push vigorously for its enactment without the deleterious amendments put on at the last legislative session;

2. Publish the fact that the Kansas Medical Society is taking strong and definite action to show its sincerity in protecting the public from incompetent physicians.

RESOLUTION NO. 75F-14

AMA Support of Medical Liability Commission

WHEREAS, The Board of Trustees of the American Medical Association recommended withdrawal of fiscal support of the Medical Liability Commission, and the American Medical Association House of Delegates voted to override the recommendations for withdrawal of support; and

WHEREAS, This matter is up for action at the December meeting of the American Medical Association House of Delegates in Hawaii; therefore be it

Resolved, That the Kansas Medical Society instruct its delegates to vote for continued support of the Medical Liability Commission, pending good evidence to do otherwise.

RESOLUTION NO. 75F-15

Special Courts to Handle Malpractice

(Not adopted. Referred for study.)

WHEREAS, There has been a fantastic increase in the technology and sophistication of medical practice in the past few decades which make it increasingly difficult for a lay jury to accurately and equitably judge malpractice cases; and

WHEREAS, Precedent has been set for special courts to handle technical problems in such fields as banking and patents, using specially trained judges rather than lay juries; and

WHEREAS, The handling of malpractice cases in specialty courts by trained judges would result in more equitable awards to the public without the degrading effect on the practice of medicine of the present inefficient system; therefore be it

Resolved, That the Kansas Medical Society request

that the legislature set up special courts to handle medical malpractice cases similar to the special courts handling cases in the fields of banking and patents.

RESOLUTION NO. 75F-16

Not Adopted.

RESOLUTION NO. 75F-17

Limits to Medical Liability

(Tabled)

WHEREAS, The size of the awards for malpractice are increasing inordinately and seemingly in step with the increasing coverage that doctors are carrying; and

WHEREAS, These factors have led to further escalation of the number and size of claims; and

WHEREAS, The compensation of patients for unfortuitous results is not the physicians' responsibility; therefore be it

Resolved, That the Kansas Medical Society recommend that its members not carry more than basic coverage in malpractice insurance.

RESOLUTION NO. 75F-18

Not adopted.

RESOLUTION NO. 75F-19

Not adopted.

RESOLUTION NO. 75F-20

HSA Designations

WHEREAS, The Committee on Chronic Respiratory Diseases is concerned with the current designation of health service areas under P.L. 93-641, that will affect future developments in the care and training programs of pulmonary diseases; therefore be it

Resolved, That the Kansas Medical Society request a reassessment by Governor Robert Bennett of the present designation of health service areas in Kansas, the principal intent of such a re-evaluation to be the retention of the major educational resource for health care professionals—the University of Kansas Medical Center—within the total program of health education and service oriented to the needs of the State of Kansas.

RESOLUTION NO. 75F-21

New Council District

(Not adopted. Held over for May.)

Resolved, That Section 8.4 *et seq.* of the By-Laws be amended by the addition of a new Council District comprised of the following counties: Allen, Neosho, Elk, Wilson, Chautauqua, Montgomery.

RESOLUTION NO. 75F-22

Implementation of AMA CPT

Resolved, That the Kansas Medical Society reaffirms its position contained in Resolution 75-28 concerning the adoption of the AMA CPT 5-digit code by the fiscal intermediary in Kansas; and be it further

Resolved, That the Executive Committee of the Kansas Medical Society meet with the Executive Committees of Blue Cross-Blue Shield in an effort to hasten the implementation of the AMA CPT 5-digit code as contained in the Kansas Relative Value Studies.

RESOLUTION NO. 75F-23

RVS

WHEREAS, The Department of Justice appears to have taken the position that the promulgation of a relative value study by the American Society of Anesthesiologists and the use of that study by members of the A.S.A. in determining their fee schedules involves a violation of the antitrust laws; and therefore be it

Resolved, That the Kansas Medical Society withdraws its endorsement of the publication entitled *Kansas Relative Value Studies,* and future such publication not be printed.

RESOLUTION NO. 75F-24

Judicial Council

Resolved, That the Executive Committee continue with the formation of an ongoing Judicial Council which shall develop a program for the consideration of grievances against members of the Society.

Rx: Pax Vobiscum

According to the digital calendar under the plastic wreath, which surrounds the battery-operated clock on the genuine synthetic, simulated woodgrain paneling on my office wall, it is time for our annual plea for membership.

Although we are inundated from mid-October by Madison Avenue techniques, which display the trappings of Christmas, we always manage to survive the onslaught, and enjoy the season; except for an occasional Scrooge or two. We are told that Christmas is the season for giving. Perhaps it is easier to think of giving when one is nourished by the thoughts of a gentle snowfall, a crackling fireplace spreading warmth to mind and body, and the occasional imbibing of some potent potable which pleases the palate.

However, there is no specific season for giving; giving of oneself is something that we should do all year long.

There are many physicians who have given a great deal of time and work to the KFMC over the past year. We thank them for their help; any success that the KFMC enjoys in the future is due to their efforts. If you would like to give of yourself in behalf of the physicians of Kansas, in their effort to make the KFMC a success, the first step is to join the KFMC. If you would like to join, or would like more information, please write to the office. We need your support.

On behalf of the Executive Committee, the Board of Directors, and the Staff, we wish you and yours a Merry Christmas and a Happy New Year.—*J.E.A.*

MEDICAL MALPRACTICE, THEN AND NOW

In his book, *Principles and Practice of Surgery,* published in 1837, Sir Astley Cooper succinctly presented the full tragedy of this medical malpractice action, as follows:

"Some years since, one of the profession, whom I had long known but had not seen for many years, called on me; I naturally inquired respecting his success. He replied, that his life had been like April, sometimes sunshine, sometimes rain. I rejoined, 'How so? You have brought up a family genteelly, and have, I understand, a respectable practice.' 'True,' said he, 'but a circumstance occurred some time ago which has given me much uneasiness; I was called to attend a case of dislocation of the shoulder joint, but it so happened that I could not discover it; after attending the patient for a considerable time, another surgeon was requested to see him, who at once pronounced the bone to be out, which in reality was the case, for in a very short time he reduced it. When the man recovered he brought action against me; I had to pay 200 pounds damages and the law expenses were 200 pounds more. The loss of the money I did not feel, but I have severely felt being pointed at as an ignorant man.' "

The elements are all here. A patient presented himself to one physician and then to another. He found the practice of the latter subserved his purposes more than the former. Whether the real purpose was restitution of function, relief of pain, ego satisfaction, or a perpetrated scheme remains obscure. There is an unavoidable and perhaps well earned personal gratification that attends the exercise of superior diagnostic skills. Nevertheless, the exercise of such skills at times subserves the playing of clinical games more than the restitution of health. Clinical games exact a higher price from the profession than the culprit.

Angered by the circumstances, the patient petitioned the court for the redress of an alleged wrong. Verification of the truth by the court remained vested in opinion, nothing more, for x-rays had not yet been discovered. The defendant's confessionary zeal would hardly provide the appropriate atmosphere for a valid defense, supporting the contention that physicians make poor witnesses in their own behalf.

The court granted the plaintiff redress for his grievance in the very terms of modern jurisprudence, the anguish attending professional depreciation, a reward tendered in gold, and an award divided equally.

Was justice done? Hardly! A shoulder dislocated for a "considerable time" virtually defies reduction. Only the expert medical witness may effectively, and believably, introduce such pathophysiological yardsticks into the decisionary legal process.—*Jack R. Cooper, M.D., Prairie Village*

Obituaries

JOHN BROWNLEE, M.D.

Dr. John Brownlee, of Hutchinson, died August 25, 1975, at the age of 93. He was born September 28, 1882, in Newton.

Doctor Brownlee graduated from the University of Kansas Medical Center in 1911, and the same year began his medical practice in Hutchinson. He practiced medicine in Hutchinson 54 years.

Survivors include one son and three daughters.

JOHN S. COLEMAN, M.D.

Dr. John S. Coleman, of Wichita, died August 3, 1975, at the age of 85. He was born January 7, 1890, in Pine Bluff, Arkansas.

Dr. Coleman was graduated from the University of Illinois School of Medicine, in 1922. He established medical practice in Wichita in 1926.

EARL G. PADFIELD, M.D.

Dr. Earl G. Padfield, 88, of Salina, died October 9, 1975. He was born in Hutchinson, July 11, 1887.

Dr. Padfield was graduated from the University of Kansas School of Medicine, in 1910. He practiced medicine in Salina from 1913, to his retirement, in 1968.

Surviving are his wife and a daughter. Memorial contributions may be made to Asbury or St. John's Hospitals of Salina.

H. PRESTON PALMER, M.D.

Dr. H. Preston Palmer, 78, of Scott City, died July 6, 1975. He was born October 14, 1897, in Hope.

Doctor Palmer began his practice in Scott City in 1931, after graduating from the Kansas University Medical School in 1929.

Survivors include his wife and daughter. Memorial contributions may be made to the donor's favorite charity.

Obituaries—Continued

MARION C. PEARSON, M.D.

Dr. Marion C. Pearson, 51, of Concordia, died August 21, 1975. He was born in Clifton on December 10, 1923.

Doctor Pearson was graduated from the University of Indiana Medical School in 1948, and practiced surgery in Concordia since 1954.

Doctor Pearson's wife, two sons, and two daughters survive. Memorial contributions may be made to the Cloud County Community College Scholarship Fund, or the Episcopal Church.

FRED G. SCHENCK, M.D.

Dr. Fred G. Schenck, of Burlingame, died July 31, 1975, at the age of 80. He was born February 26, 1895, in Harveyville.

Doctor Schenck graduated from the Washington University School of Medicine at St. Louis in 1920. He practiced medicine in Burlingame from 1921 until his retirement in 1965.

His daughter survives him. Memorial contributions may be made to the "Dr. Fred G. Schenck Medical Scholarship Trust Fund," in Burlingame.

JOHN C. SCOTT, M.D.

Dr. John C. Scott, of Great Bend, died October 4, 1975, at the age of 49, following an airplane crash. He was born May 12, 1926, in Richmond, Ohio.

Dr. Scott was graduated from the University of Kansas School of Medicine, in 1959. He practiced medicine in Kansas since 1965.

Survivors include a daughter and three sons. Mrs. Scott also died in the accident.

MAURICE F. STOCK, M.D.

Dr. Maurice F. Stock of Vacaville, California (formerly of Pittsburg), died June 9, 1975, at the age of 64. He was born in Wild Horse, Colorado, on September 19, 1910.

Doctor Stock was graduated from the Saint Louis University School of Medicine in 1934. He practiced in Pittsburg since 1952.

His wife survives him.



Open Letter to the Doctors of Kansas

As the current year draws to a close, it is wise to look back and evaluate what has transpired in the Auxiliary organization on the national, state, and county levels.

There has been a shifting of emphasis from national to county level. This was implemented by the national organization inviting county presidents-elect to the Fall Confluence in Chicago this year, giving them exposure to the information and activities of the organization before they begin their term of office. National has also changed its name to "American Medical Association Auxiliary," in keeping with the policy of accepting as members both husbands and wives of physicians. In addition, the house of delegates voted a $3 increase in dues, changing the national dues from $4 to $7, effective July 1, 1976.

At the state Fall Conference in Denton, it was recommended that the name of the Kansas Auxiliary be changed to "Kansas Medical Auxiliary," to comply with the national Auxiliary name. It was also recommended that the dues be raised from $4, but not to exceed $8. These matters are to be considered and decided upon at the state convention next May. This is mentioned to you because in some states the dues of both husband and wife have been combined and collected together, and it has worked very well. This is mentioned so that the possible merits of such an arrangement may be considered for Kansas.

The state and county officers, chairmen, and members have met together at the Fall Conference, workshops, coffees, teas, and made many personal contacts thus far. We have learned that these personal contacts and various meetings in the counties are the best means of surfacing problems and finding solutions for them. The informal discussions help us to really know and appreciate the valuable storehouse we have in the doctors' wives in Kansas. This is when the true meaning of our theme in Auxiliary this year is really demonstrated—"Each one reach one and share." In so doing, all have benefited.

The state chairmen brought many ideas and information to the members at the workshops concerning health education, community health, international health activities, genetics, GEMS program, Operation Helpmate, legislation, communication, AMA-ERF, membership, aging and homebound, and professional liability. The latter topic was included at each meeting.

We have asked all counties to review their auxiliaries, eliminate those programs which are not functioning, and tailor the operation to fit the needs of the members, and the needs of the community around them.

Again, Doctor, I ask you to please urge your wife to become a member of the Auxiliary, so she will be one of us, for we must present a united front to meet all the challenges ahead.

At this season, I would like to extend sincere greetings for a Blessed Christmas and a very Happy Bicentennial Year from our family to each of you and your family.

Sincerely,
Anita Yoder
President,
Woman's Auxiliary to the
Kansas Medical Society

The Disabled Physician

(Continued from page 297)

7. Jones, Robert E.: Do psychiatrists cover up addiction of physicians? *Psychiat. Opinion* 12:31-36, 1975.

8. Council on Mental Health: "The sick physician." *JAMA* 223:684-687, 1973.

9. Vaillant, George; Sobowale, Nancy and McArthur, Charles: Some psychological vulnerabilities of physicians. *New Eng. J. Med.* 287:372-375, 1972.

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Information for Authors

Manuscript Preparation

Manuscripts must be typewritten, double spaced, leaving wide margins. Submit the original, plus one copy if possible.

Titles should be short, specific, and amenable to indexing. A subtitle is frequently used to keep the main title short.

Summary: All manuscripts should include a short abstract which is a factual (not descriptive) summary of the work.

Author Responsibility: The author is responsible for all statements made in his work, including changes made by the copy editor. Manuscripts are received with the explicit understanding that they are not simultaneously under consideration by any other publication. Publication elsewhere will be subsequently authorized at the discretion of the Editor.

Galley Proof: To make extensive changes in the article after the text has been set in type may require an additional cost which exceeds the original. The galley proof is for correction of ERRORS, and a rewriting of the article should be done on the original copy BEFORE it is submitted for publication.

Drugs should be called by their generic names; the trade names can be added in parentheses if they are considered important. All *units of measure* must be given in the metric system.

References

Bibliographic references should not exceed 20 in number, documenting key publications. Personal communications and unpublished data should not be included. References should be arranged according to the order of citation, and not alphabetically. All references must be numbered consecutively and all must be cited in the text. Use the style of the AMA publications, giving: name of author, title of article, name of periodical, volume, pages, year.

Illustrations

All material which cannot be set in type, such as photographs, line drawings, graphs, charts, tracings (for preparation of tables, see below) must be mounted on white cardboard. All must be identified on the back as to figure number, author's name, and an arrow indicating top. Legends should be typed double spaced on a separate sheet of paper, limited to a maximum of 30 words.

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Photographic material should be submitted in duplicate as high-contrast, glossy prints. Color illustrations will be accepted for publication only if the author assumes the cost.

THE JOURNAL will assume the cost of B/W engravings and cuts up to $35 (or 5 cuts). Engraving cost for illustrations in excess of $35 will be billed to the author.

Tables

Because tables are set by hand, their cost is comparable to illustrations. A reasonable number of tables are allowed without cost to the author.

Tables should be self-explanatory and should supplement, not duplicate, the text. Since the purpose of a table is to compare or classify related items, the data must be logically and clearly organized. The relationship and comparison are established by the correct choice of column heads (captions of vertical columns) and stubs (left entries in horizontal listings).

Each table should be typed double spaced, including all headings, on separate sheets of lettersize paper. Oversize paper should not be used. Instead, repeat heads and stubs on a second sheet for tables requiring extra width. Number tables consecutively. Each table must have a title.

Reprints

A reprint order form with a table covering cost will be sent with the galley proof to each contributor. Since the JOURNAL has no way to provide for reprints, they must be ordered by the author and purchased directly from the printer.

IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or Narcan® (naloxone HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage. Use with care in patients with acute ulcerative colitis and discontinue use if abdominal distention or other symptoms develop.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, hyperthermia, tachycardia, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. A narcotic antagonist may be used in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to:
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Medical Department, Box 5110,
Chicago, Illinois 60680

455



Diarrhea can hook anyone. When it does, physicians and patients both want prompt control of diarrheal symptoms. Lomotil will usually control diarrhea promptly.

This rapid action can halt the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate specific therapy should be given along with Lomotil.

Lomotil is contraindicated in children less than 2 years old.

Lomotil® TABLETS LIQUID

Each tablet and each 5 ml. of liquid contain: diphenoxylate hydrochloride 2.5 mg. (Warning: May be habit forming), atropine sulfate 0.025 mg

holds the line.

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?



Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration

The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the



Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

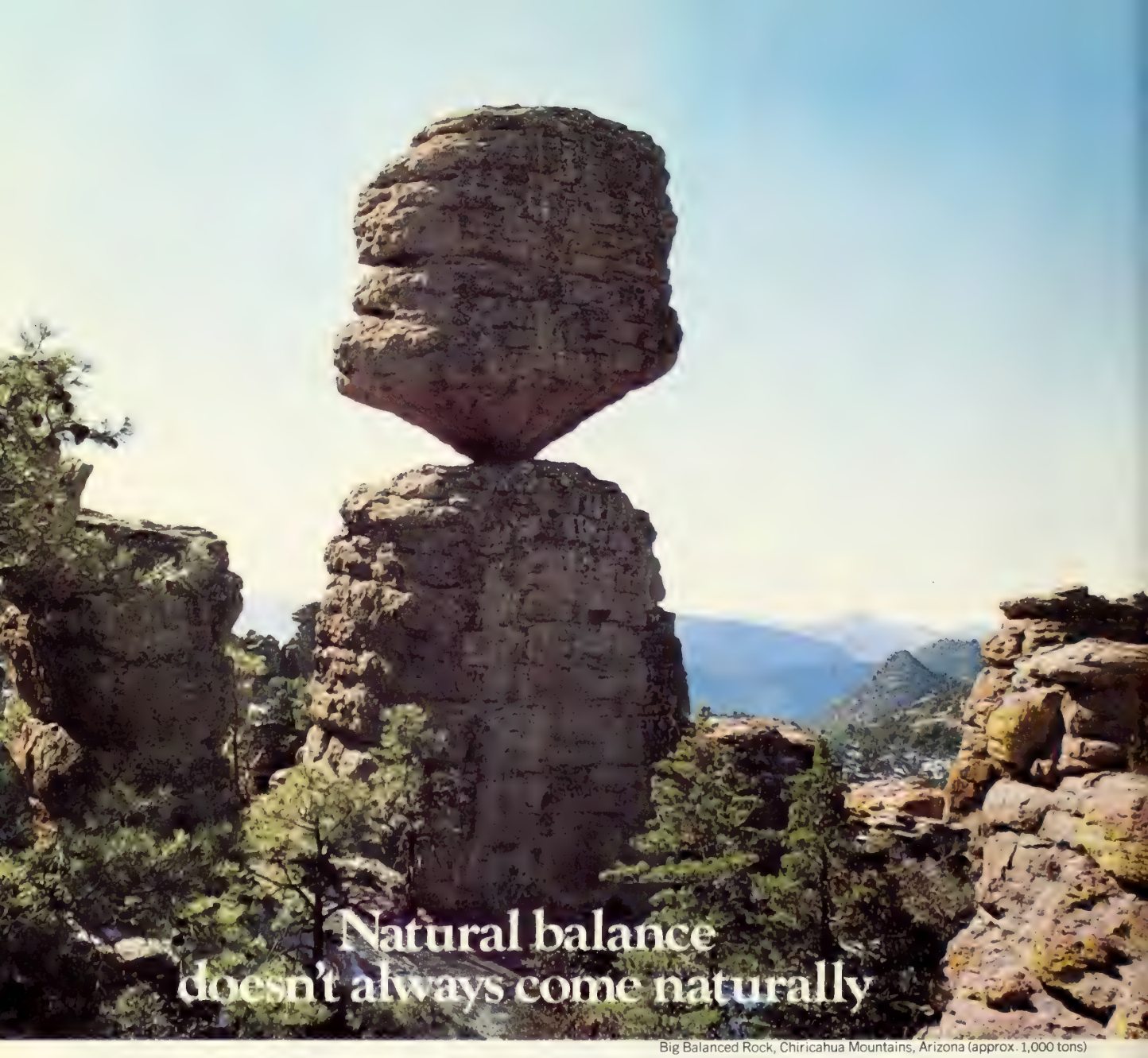
The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

□ Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
□ Can relieve nausea and vomiting often associated with vertigo.*
□ Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
□ Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
□ Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

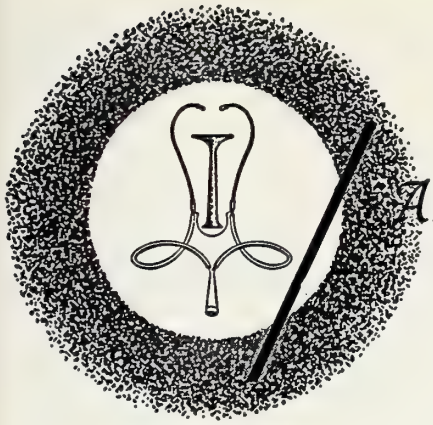
Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*



Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the* Doctor's Calendar. *Notice of the session is posted in advance to allow the physician time to make preparations.

JANUARY

Jan. 28-30 — American Society for Surgery of the Hand, Fairmont Hotel, New Orleans. INFO: Ms G. M. Gorman, 3 Parker Place, Suite 233, 2600 S. Parker Road, Aurora, CO 80232.

FEBRUARY

Feb. 27 — American College of Physicians Kansas Regional Meeting, Plaza Holiday Inn, Wichita. INFO: John L. Morgan, M.D., 919 West 12th, Emporia 66801.

MARCH

Mar. 1-5 — Aspen Radiology Annual Conference, Aspen. INFO: E. Salzman, M.D., Beth Israel Hospital, Denver 80204.

Mar. 4-6 — Central Surgical Association, Holiday Inn, Rochester. INFO: A. J. Walt, M.D., 540 E. Canfield, Detroit 48201.

Mar. 8-12 — Radioassay Techniques Training Course, San Diego. INFO: N. C. Karpin, 9650 Rockville Pike, Bethesda 20014.

Mar. 25-27 — Clinical Neuro-Otolaryngology, Pittsburgh. INFO: S. N. Busis, M.D., Eye and Ear Hospital, Pittsburgh 15213.

Mar. 27-31 — American Society of Abdominal Surgeons, Pick Congress Hotel, Chicago. INFO: B. F. Alfano, M.D., 675 Main, Melrose, MA 02176.

APRIL

Apr. 4-9 — American College of Allergists, Las Vegas Hilton, Las Vegas. INFO: E. Bauers, 2100 Dain Tower, Minneapolis 55402.

Apr. 5-8 — American College of Physicians, Civic Center, Philadelphia. INFO: Convention Dept., American College of Physicians, 4200 Pine, Philadelphia 19104.

Apr. 8-9 — AMA National Conference on Rural Health, Hyatt Regency, Phoenix. INFO: AMA Dept. of Rural and Community Health, 535 N. Dearborn, Chicago 60610.

Apr. 26-29 — American College of Surgeons, Boston. INFO: C. R. Hanlon, M.D., 55 E. Erie, Chicago 60611.

University of Miami School of Medicine

Jan. 5-8 — *Pediatric Nephrology III,* Bal Harbour

Jan. 20-23 — *Pathology,* Miami Beach

Jan. 23-25 — *Anatomic Pathology,* Miami Beach

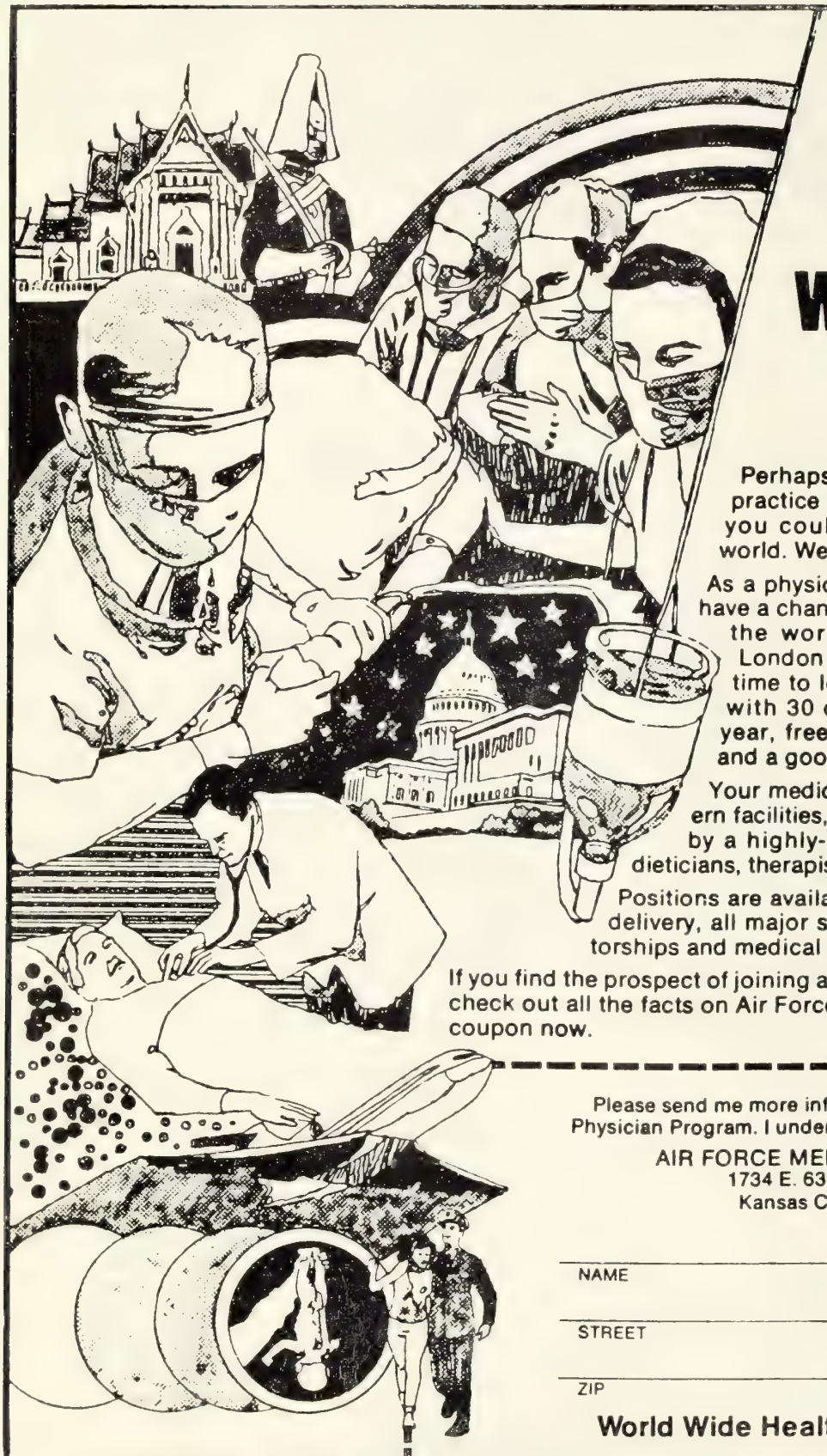
Feb. 23-27 — *Basic Neurology,* Miami Beach

Mar. 31-Apr. 3 — *Renal Disease and Hypertension,* Bal Harbour

For further information, write the Division of Continuing Medical Education, U. of Miami School of Medicine, P.O. Box 520875, Biscayne Annex, Miami 33152.

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FOR LONG-TERM CONTROL OF HYPERTENSION*

Serum K^+ and BUN should be checked periodically. (See Warnings Section.)



Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* **Warning**
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

***Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
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the “empty nest syndrome”

TRIAVIL®

containing perphenazine and amitriptyline HCl
a tranquilizer-antidepressant

for depression with moderate anxiety

in many cases a result of the "empty nest syndrome"

The mid-life crisis: a critical crossroad

Preparation for change—intellectually, vocationally (or avocationally), and emotionally—can often help the menopausal-aged woman cope successfully with a new and different role after the children are grown and gone. Even when these changes have been anticipated and prepared for, a mid-life depression with moderate anxiety is not uncommon—a syndrome often uncontrolled by counseling or other appropriate measures and for which specific medication may be required.

When depression with moderate anxiety persists, TRIAVIL can often help

TRIAVIL provides a highly effective antidepressant and tranquilizer for symptomatic relief of *both* depression and coexisting moderate anxiety. The patient may be able to function more effectively in her daily life.

Many symptoms associated with depression and anxiety such as insomnia, fatigue, anorexia, and functional G.I. complaints, are frequently alleviated. More complete symptomatic relief is usually afforded than with an antidepressant or a tranquilizer alone. In fact, when anxiety masks the depressive state, treatment with just a tranquilizer may deepen the depression and delay symptomatic improvement.

Advantages of the two components in TRIAVIL taken together

A single tablet containing both an antidepressant and a tranquilizer encourages patients to take medication properly and reduces the risk of dosage confusion and error. Cost of therapy to the patient is usually less. To date, clinical evaluations have revealed no undesirable reactions peculiar to the combination. Tablets TRIAVIL are available in four different combinations affording flexibility and individualized dosage adjustment.

Treatment with TRIAVIL—a balanced view

Contraindicated in CNS depression from drugs; in the presence of evidence of bone marrow depression; and in patients hypersensitive to phenothiazines or amitriptyline. Should not be used during the acute recovery phase following myocardial infarction or in patients who have received an MAOI within two weeks. Patients with cardiovascular disorders should be watched closely. Not recommended in children or during pregnancy. The drug may impair mental or physical abilities required in the performance of hazardous tasks and may enhance the response to alcohol. Antiemetic effect may obscure toxicity due to other drugs or mask other disorders. Since suicide is a possibility in any depressive illness, patients should not have access to large quantities of the drug. Hospitalize as soon as possible any patient suspected of having taken an overdose.

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For additional prescribing information, please turn to the following page.

for highly effective relief of depression with moderate anxiety

TRIAVIL®

containing perphenazine and amitriptyline HCl a tranquilizer-antidepressant

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CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Do not give concomitantly with MAOI drugs because hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. Allow minimum of 14 days between therapies, then initiate therapy with TRIAVIL cautiously, with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

WARNINGS: TRIAVIL should not be given with guanethidine or similarly acting compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, particularly in high doses, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Caution patients performing hazardous tasks, such as operating machinery or driving motor vehicles, that drug may impair mental and/or physical abilities. Not recommended in children or during pregnancy.

PRECAUTIONS: Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

Perphenazine: Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides.

Amitriptyline: In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported.

ADVERSE REACTIONS: Similar to those reported with either constituent alone.

Perphenazine: Side effects may be any of those reported with phenothiazine drugs: extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw (e.g., protrusion of tongue, puffing of cheeks, puckering of mouth, chewing movements). Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonism agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. It has been suggested that fine vermicular movements of the tongue may be an early sign of the syndrome, and that the full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude, muscle weakness, mild insomnia. Other adverse reactions reported with various phenothiazine compounds include blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); grand mal convulsions; cerebral edema; polyphagia; photophobia; skin pigmentation; and failure of ejaculation.

Amitriptyline: Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs. *Cardiovascular:* Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Anticholinergic:* Dry mouth; blurred vision; disturbance of accommodation; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. *Allergic:* Skin rash; urticaria; photosensitization; edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis; leukopenia; eosinophilia; purpura; thrombocytopenia. *Gastrointestinal:* Nausea; epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea; parotid swelling; black tongue. *Endocrine:* Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. *Other:* Dizziness; weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; jaundice; alopecia. *Withdrawal Symptoms:* Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

OVERDOSAGE: All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1—3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

For more detailed information, consult your MSD Representative or see full Prescribing Information
Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritating symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimulation. Your patients will appreciate the 24-hour relief they can get from just one tablet every 12 hours.

Cold or



Allergy?

Whether it's a cold or an allergy, Dimetapp Extentabs® relieve stuffiness, drip and congestion.*

*

INDICATIONS

Based on a review of this drug by the National Academy of Sciences — National Research Council and/or other information, FDA has classified the following indications as lacking substantial evidence of effectiveness as a fixed combination: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

A·H·ROBINS

A. H. Robins Company, Richmond, Va. 23220

when pain goes on... and on... and on–



For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.

Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides ¼ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

Phenaphen with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming)

Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

(III) Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

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